15 Cents a Copy

The OIL and GAS JOURNAL

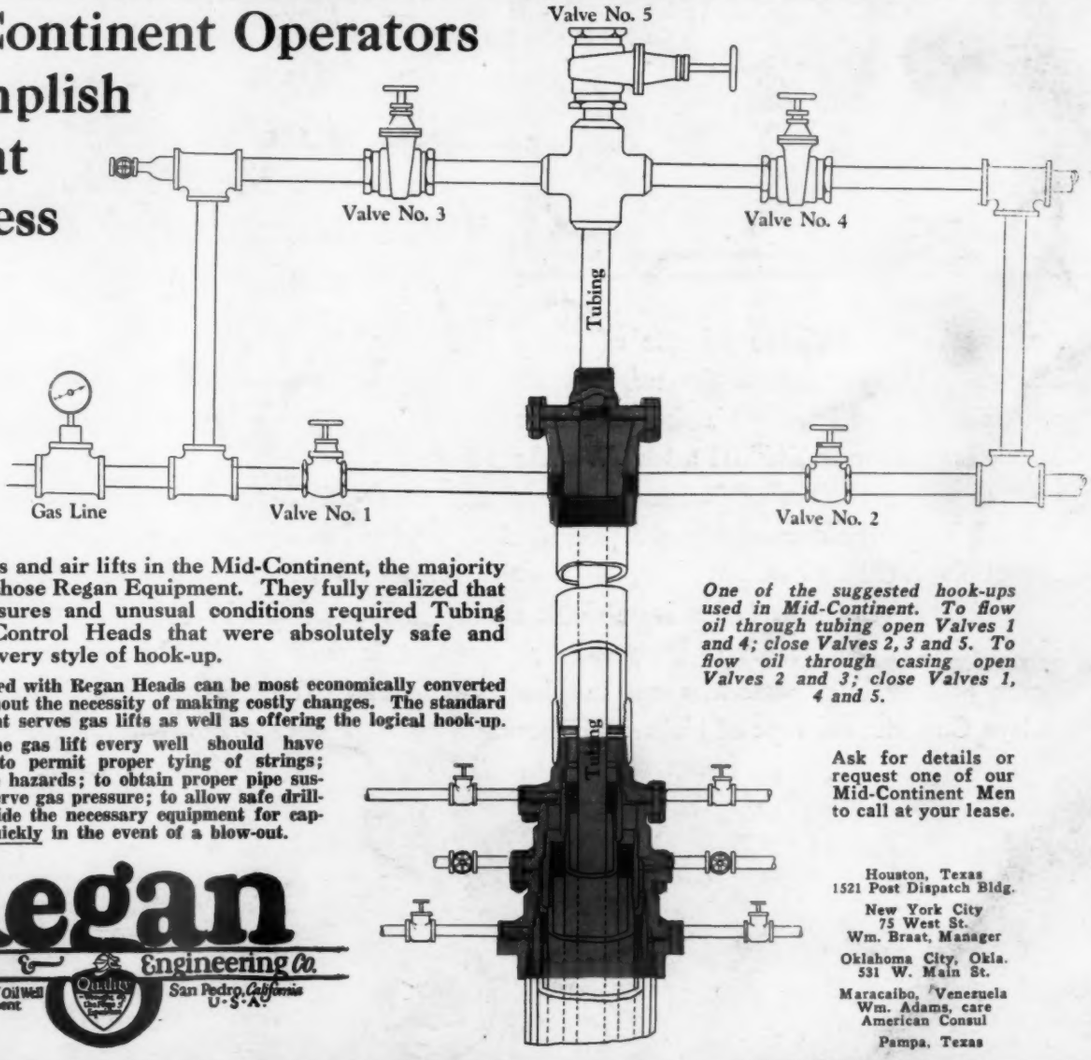
PRODUCING REFINING MARKETING

Published Every Thursday TULSA, OKLAHOMA, AUGUST 25, 1927 $6.00 a Year

Cleaver-John Library
E.I.S.D.-T.-12-31-2

Gas Lifts with Regan Heads

Mid-Continent Operators accomplish great success



One of the suggested hook-ups used in Mid-Continent. To flow oil through tubing open Valves 1 and 4; close Valves 2, 3 and 5. To flow oil through casing open Valves 2 and 3; close Valves 1, 4 and 5.

In applying gas and air lifts in the Mid-Continent, the majority of Operators chose Regan Equipment. They fully realized that the high pressures and unusual conditions required Tubing Heads and Control Heads that were absolutely safe and adaptable to every style of hook-up.

Any well equipped with Regan Heads can be most economically converted to a gas lift without the necessity of making costly changes. The standard Regan Equipment serves gas lifts as well as offering the logical hook-up.

Even without the gas lift every well should have Regan Heads,—to permit proper tying of strings; to overcome fire hazards; to obtain proper pipe suspension, to conserve gas pressure; to allow safe drilling and to provide the necessary equipment for capping the well quickly in the event of a blow-out.

Ask for details or request one of our Mid-Continent Men to call at your lease.

Regan Forge & Engineering Co.
Manufacturers of Oil Well Equipment
San Pedro, California U.S.A.

Houston, Texas
1521 Post Dispatch Bldg.

New York City
75 West St.
Wm. Braat, Manager

Oklahoma City, Okla.
531 W. Main St.

Maracaibo, Venezuela
Wm. Adams, care
American Consul

Pampa, Texas

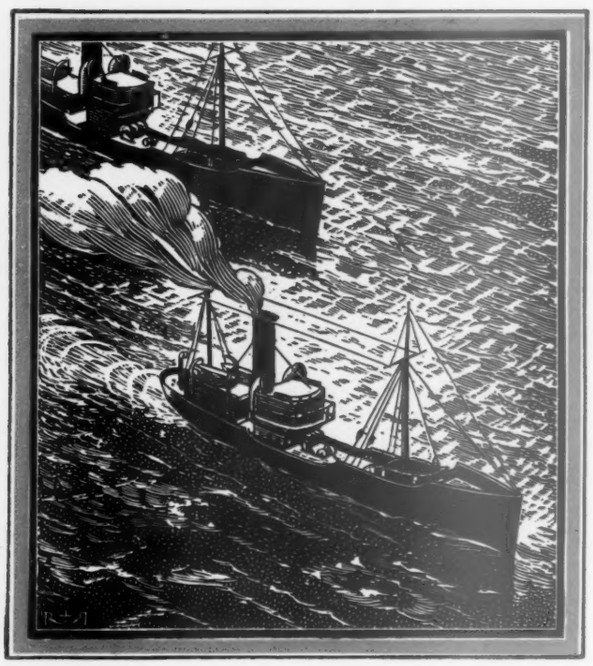
Advertisers' Index on Page 33

Table of Contents on Page 34

Get

Long Distance . . .

the boats are coming in



THE EXECUTIVES of a large New York fish company do not wait for their steam trawlers to come in from the fishing banks. While the boats are hundreds of miles at sea they are notified by wireless of the size and nature of the catch. With this information at hand, long distance telephone calls are made to big dealers throughout the eastern section of the United States. The cargo is sold before the boats reach the docks.

BUSINESS IS INCREASING its use of Long Distance. Many concerns do millions of dollars' worth of buying via the telephone lines. Important individual sales. Weekly calls to preferred lists of dealers or customers. Special long distance selling campaigns. And for stubborn collections.

Wherever the telephone is used, it saves the costly time of waiting. Decreases the expense of traveling. Smooths out tangles and delays. Cuts the red tape of bickering. Increases business. Long distance calls get things done with less fuss and fewer dollars. They put order and good results into a business.

One of the best things about Long Distance is, it will nearly always cost less than you think. What distant call would be helpful and profitable now? . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

Doubly safe

EVEN an ordinary Eveready Flashlight is infinitely safer to use around gases and vapors than an open flame. But the Eveready Safety Flashlight shown herewith is *doubly* safe. It has a projecting, protecting lens-ring that guards the lamp glass against breakage.

In case the lamp glass should be shattered (which isn't likely), the circuit would be opened instantly, due to the fact that the lamp is spring-mounted. This double-safety feature has won the official approval of the Bureau of Mines and the Underwriters' Laboratories.

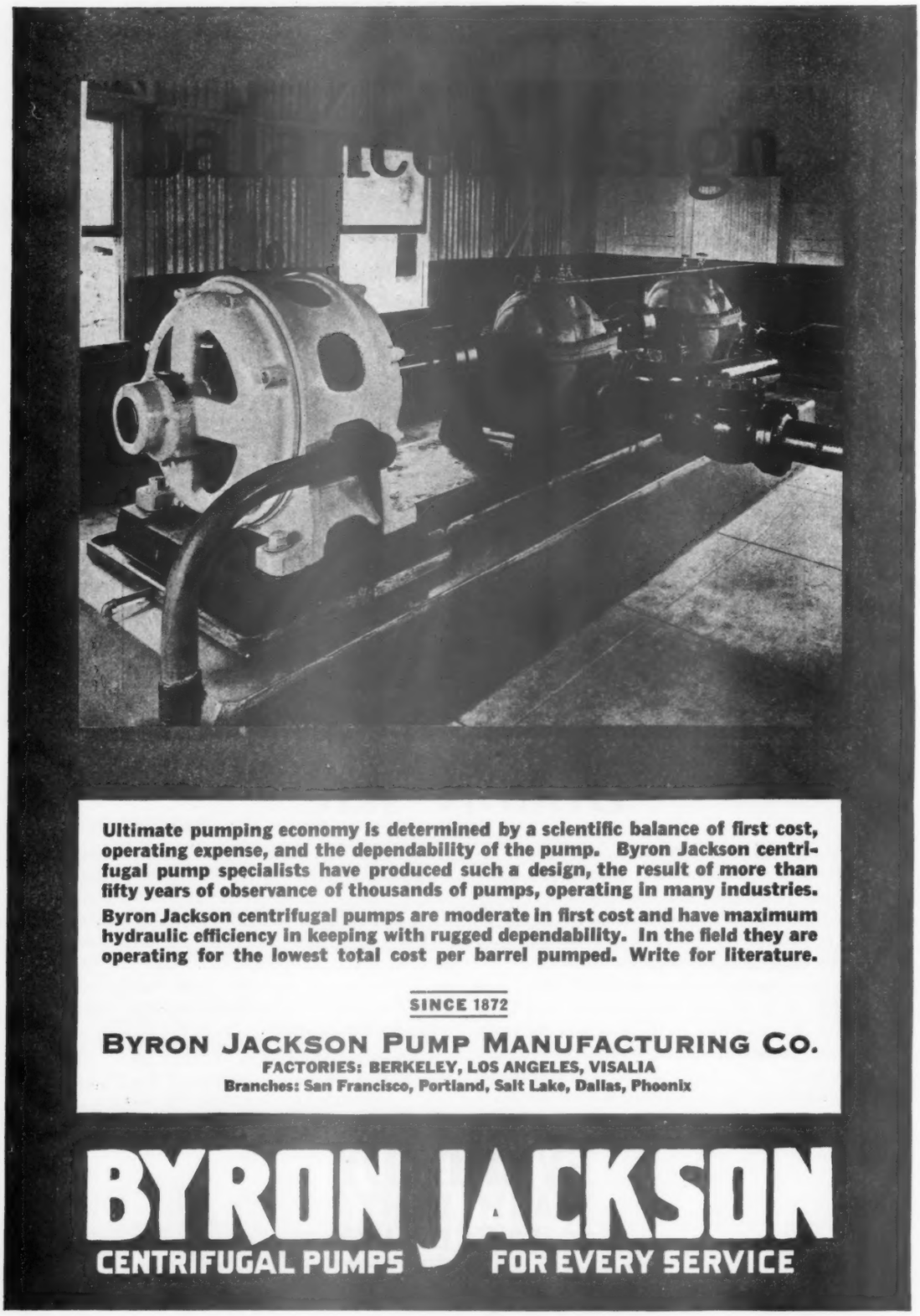
The Eveready Safety Flashlight is otherwise a standard Eveready 3-cell Focusing Spotlight. It has a range of 300 feet. It has the convenient ring-hanger, the safety-lock switch, etc. Leading industries are adopting this special light as standard equipment. They keep it loaded and on the job with fresh, strong Eveready Batteries—the brightest-burning, longest-lasting batteries made.

NATIONAL CARBON COMPANY, INC.
New York San Francisco
Unit of Union Carbide and Carbon Corporation

EVEREADY
FLASHLIGHTS
& BATTERIES
–they last longer

Eveready Radio Batteries . . . Eveready-Mazda Miniature Lamps . . . Eveready Columbia Dry Batteries

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the postoffice at Tulsa, Okla., under the Act of March 3, 1879.



Ultimate pumping economy is determined by a scientific balance of first cost, operating expense, and the dependability of the pump. Byron Jackson centrifugal pump specialists have produced such a design, the result of more than fifty years of observance of thousands of pumps, operating in many industries.

Byron Jackson centrifugal pumps are moderate in first cost and have maximum hydraulic efficiency in keeping with rugged dependability. In the field they are operating for the lowest total cost per barrel pumped. Write for literature.

SINCE 1872

BYRON JACKSON PUMP MANUFACTURING CO.
FACTORIES: BERKELEY, LOS ANGELES, VISALIA
Branches: San Francisco, Portland, Salt Lake, Dallas, Phoenix

BYRON JACKSON
CENTRIFUGAL PUMPS FOR EVERY SERVICE

Stuffing Cartridge Container with Eagle Lead Wool—as easily as you would handle ordinary rope

The Cartridge Container stuffed with Eagle Lead Wool, ready to be lowered at the end of tools to the battle ground of water

Write for this interesting booklet FREE

Plugging off bottom water

—the money saving method

THERE is no time for slow methods when bottom water comes into a well. But economy is a necessary consideration—and Eagle Lead Wool is economical for two reasons:

First, only as much lead wool as needed is shot to the battle ground of water. One cartridge or five—there is no waste.

Second, it shuts off water completely, immediately. Eagle Lead Wool is stuffed into a special cartridge container, developed by Eagle-Picher, and lowered into the well. Under pressure, the loose spongy wool is forced through the meshes of the container and becomes a plug of pure lead. No cracks or crevices are possible, no corrosion from alkaline water.

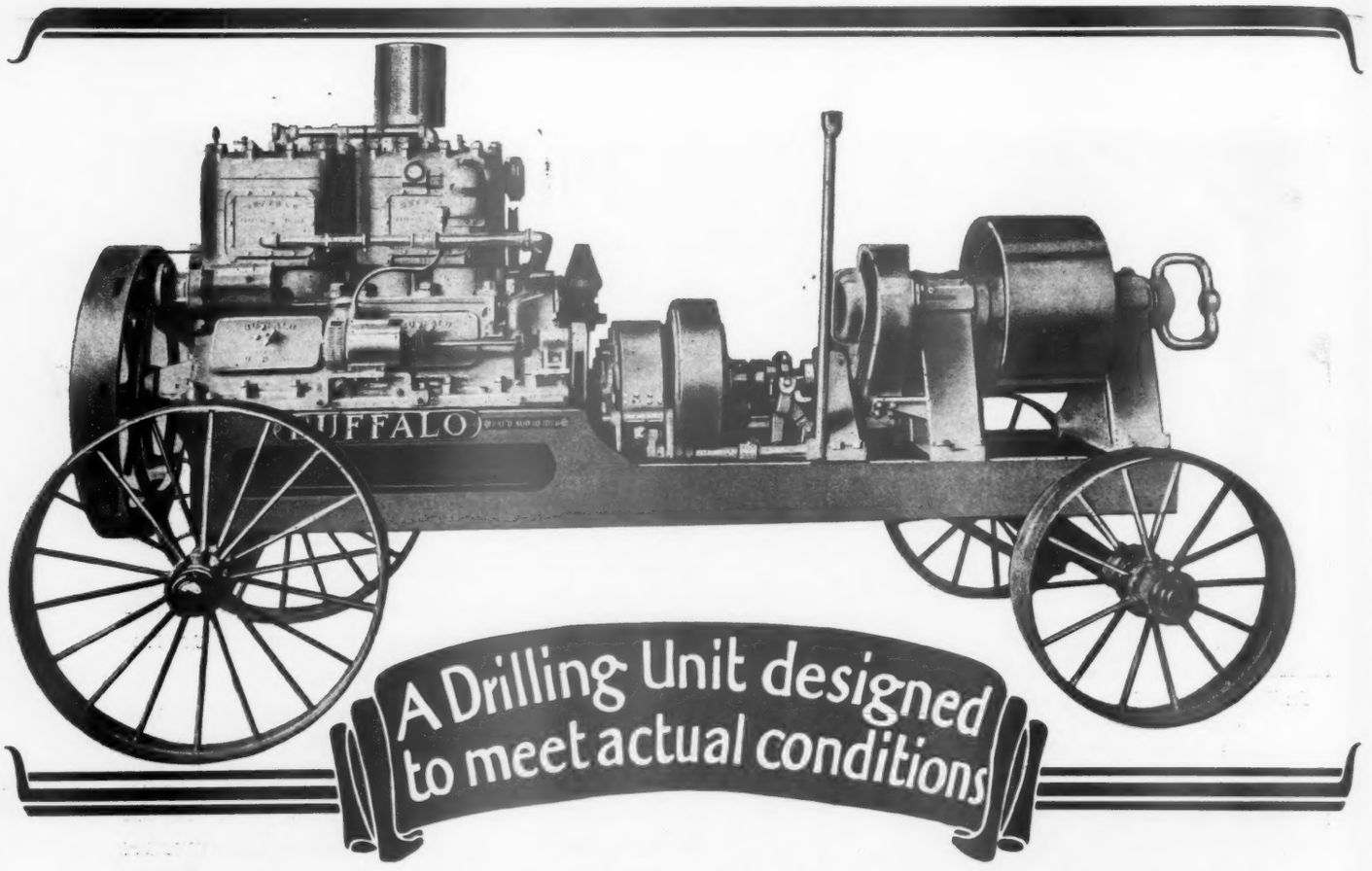
Eagle Lead Wool is as easy and quick to handle as ordinary rope. You can order it from your dealer, who stocks the Special Cartridge Container in all sizes. Or write direct to Eagle-Picher at Joplin. Free descriptive booklets will be sent on request.

The EAGLE-PICHER LEAD COMPANY
Chicago · Joplin · Cincinnati

EAGLE LEAD WOOL

and Cartridge Containers

Producers of lead and allied products · Eleven Plants · Branches in all principal cities



A Drilling Unit designed to meet actual conditions

STEADY work in the Pennsylvania, Kansas and Texas fields has proved that the Buffalo Drilling Unit is able to meet actual conditions.

One contractor in Kansas reports that not one of the 12 Buffalo Drilling Units he is running has been shut down on account of engine trouble.

Another drilled 49 wells at a cost of only $172.50 for replacements.

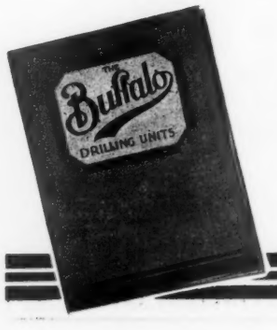
And still another reports 32 wells drilled at a cost of $75.00 for repairs. Other reports show a saving of one dollar per foot in drilling costs, a big saving in moving expense in every well, fewer repairs, less time lost in break-downs.

The Buffalo Drilling Unit is strong, dependable, built for hard work and lots of it. It has plenty of power—a four-cylinder, heavy duty motor with 6¾ in. bore and 9 in. stroke. A wide range of speed to meet all needs. The equipment includes electric starter. Lubrication is of the full pressure type and requires no special attention from the operator except to replenish the oil from time to time and an occasional glance at the pressure gauge to see that everything is operating properly. It operates on gas, gasolene or both and is very economical in fuel. Its water consumption is small, approximately one-half barrel per day.

The Buffalo outfit is all in one unit with solid cast steel frame. Clutch strain and shifting of alignment are eliminated. It can be rigged up in one hour—requires no special setting form. The old rig timbers can be used which means a saving of from $40 to $100 in moving cost. A well can be rigged up and spudded the same day. The Buffalo Drilling Unit is equal to steam in dropping tools or pulling a bailer. It will drill and spud just as fast as any outfit operating on any other power.

It has drilled wells to a depth of 4,878 feet and handled a string of pipe weighing 45 tons. In cases where fishing jobs are encountered the Buffalo will readily pull two or three strings of tools. In muddy holes it will give any desired motion—no special device for motion building is needed to give tools the proper drilling motion.

The Buffalo Drilling Unit is also built in a larger size, covering practically all oil well drilling requirements.



If you have not received a copy of the new booklet which tells all about the Buffalo Drilling Units, send for it today.

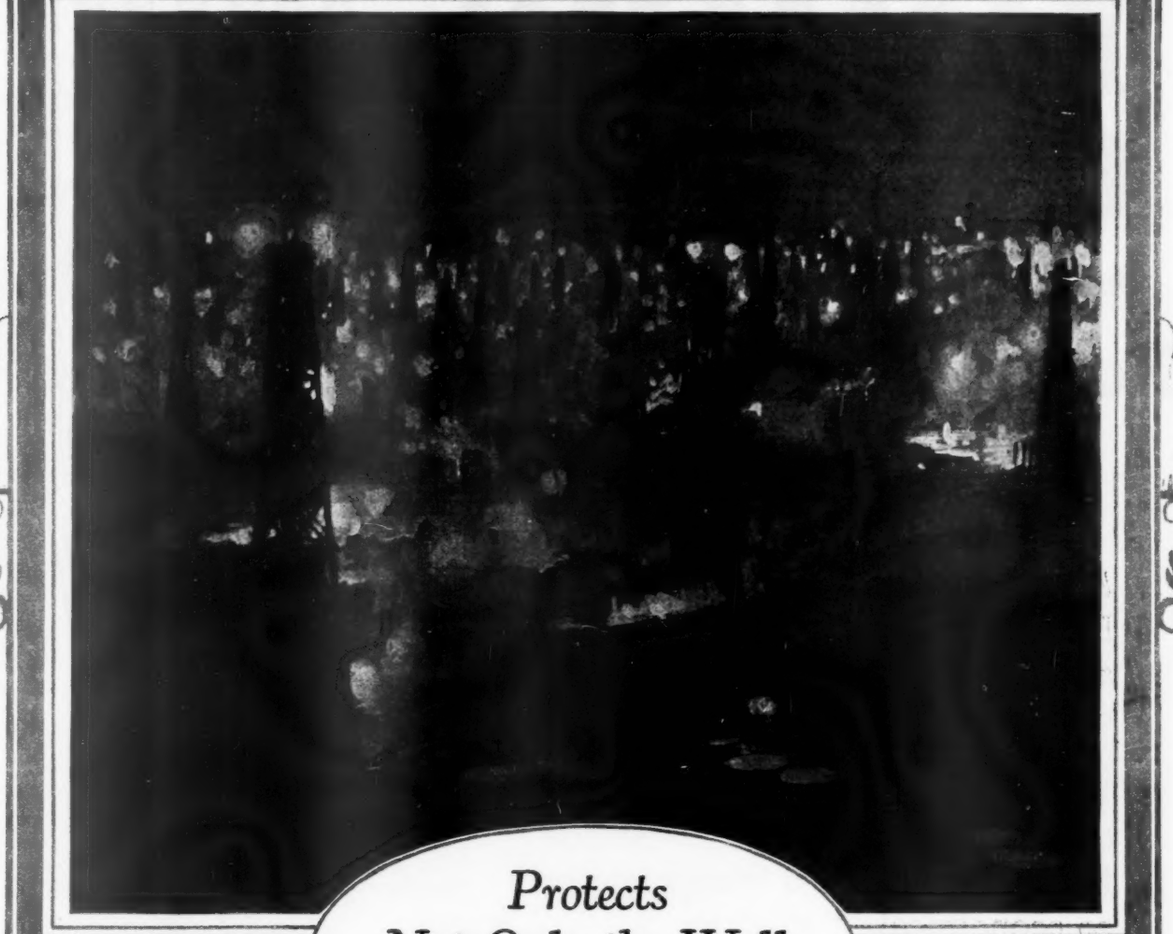
BUFFALO GASOLENE MOTOR CO.

1282-1292 Niagara St. Buffalo, N. Y.

R. H. Shields, Western Distributor
El Dorado, Kans. McCamey, Texas
Midland, Texas Abilene, Texas

The Prichard Supply Co.
Mannington, W. Va.
Waynesburg, Va.

R. R. Reck
Bradford, Penna.
Parkersburg Rig & Reel Co.
Parkersburg, W. Va.



Protects Not Only the Well But the Field

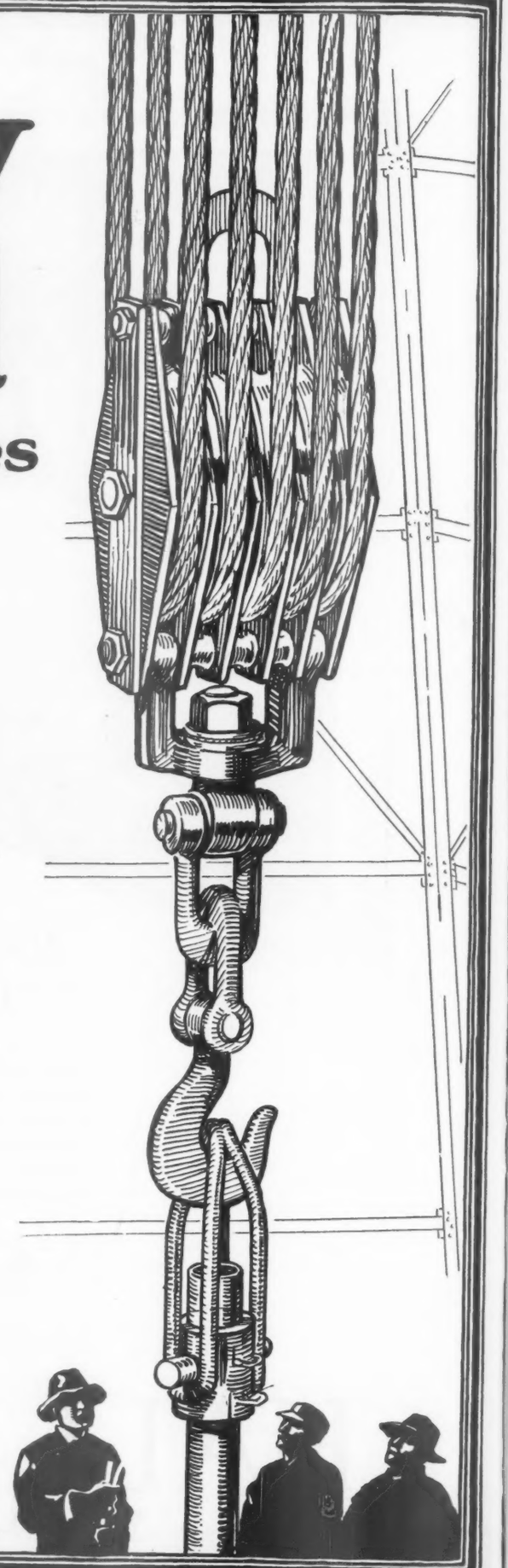
. . . . . In addition to protecting the individual well, Halliburton Oil Well Cementing prevents *shifting formations* and *migration of fluids*. In consequence, it has saved entire fields from premature barrenness and abandonment. Few organizations have contributed so materially to the much-discussed conservation movement.

HALLIBURTON
OIL WELL CEMENTING CO.
Duncan, Oklahoma

HALLIBURTON
OIL WELL CEMENTING CO.
Duncan, Oklahoma

Yellow Strand

Rotary Drilling Lines



It's strength you need in a Rotary Line—strength combined with the ability to bend around the sheaves of the crown block without injury.

It is this valuable combination of qualities that causes Yellow Strand Rotary Lines to last longer and be so economical.

The wire for Yellow Strand is drawn to our special specifications in Europe and imported by us. No wonder Yellow Strand Rotary Lines are so good!

Ask for Catalog K-2

BRODERICK & BASCOM ROPE CO.
St. Louis, Mo.

Branches: 68-70-72 Washington St., New York City, and Seattle, Wash.

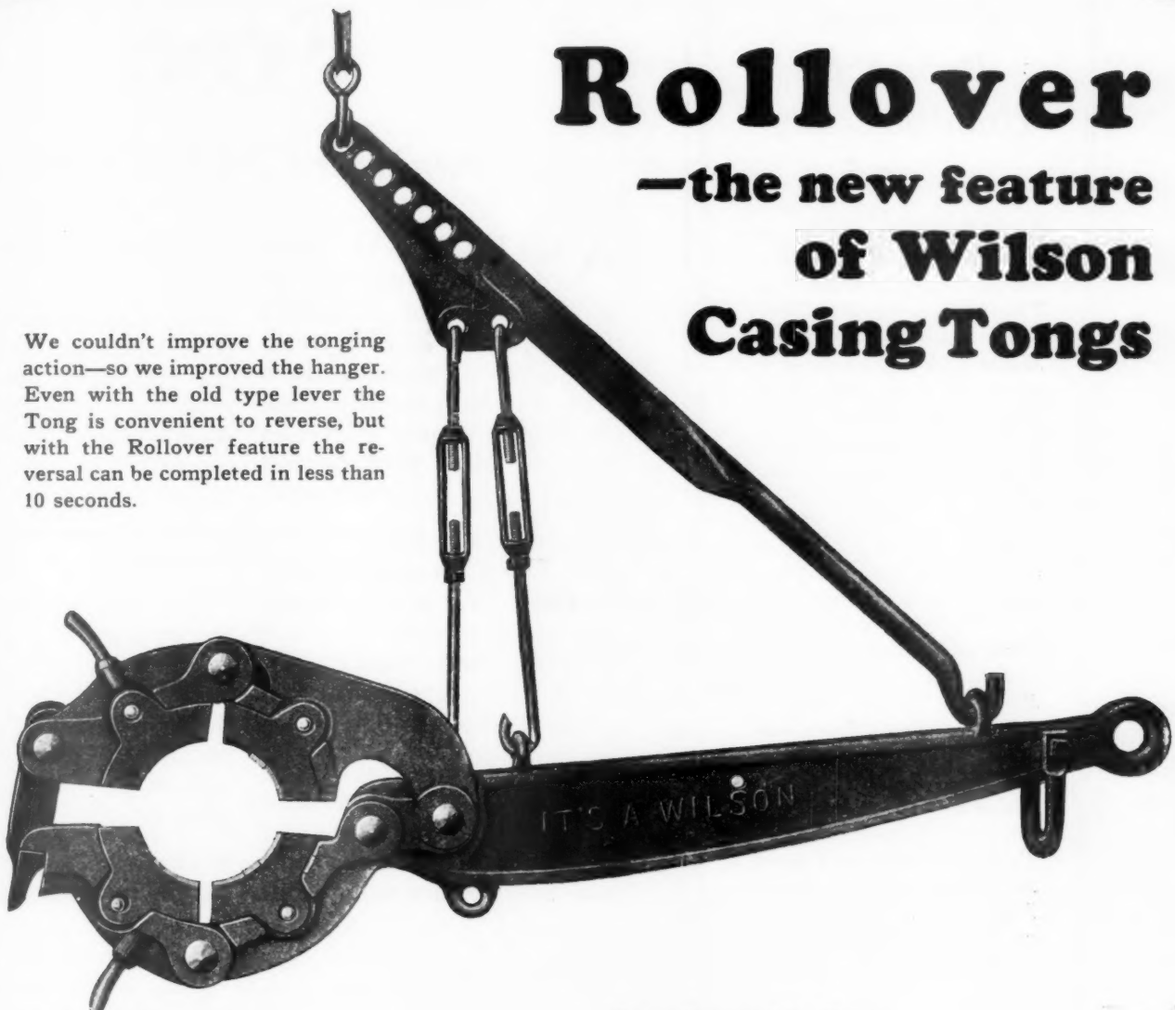
Factories: St. Louis, Mo., and Seattle, Wash.

XIII

It's a Wilson

Rollover
—the new feature of Wilson Casing Tongs

We couldn't improve the tonging action—so we improved the hanger. Even with the old type lever the Tong is convenient to reverse, but with the Rollover feature the reversal can be completed in less than 10 seconds.



New Rollover Feature
—for instant reversal from right to left, or vice versa.

Spring-Latch Feature
—latches Tong automatically, keeping it securely locked.

2-Step Feature
—permits tonging of different diameters. One Tong size fits casing and coupling.

Spring Dowel Pins
Bushings can be slipped into place instantly. No bolts. Spring dowels hold them in place.

Equalized Pressure
The design is fundamentally correct, permitting proper application of force. An even grip prevents crimping or crushing of pipe or casing.

10″ for Rotary
The 10″ casing tong can be bushed to fit rotary sizes. When bushings are ordered for rotary sizes 2 of the set of 4 are equipped with dies; beveled at top and bottom.

Interchangeable Parts
The new Rollover Lever and Hanging Device are interchangeable with your Wilson Rotary and Casing Tong Heads, except 8¼″ Extra Heavy Casing Tongs and 8″ Double Extra Heavy Rotary Tongs. The change can be made on the derrick floor.

Chinese Red
Wilson Products are now painted Chinese Red. for immediate identification and for protection.

Ask for Literature.

Wilson Oil Tools Corp.
DISTRIBUTORS FOR
Wilson & Willard Mfg. Co.

Factory and Distributor's Office It's a Wilson 2301 East Vernon Ave
Los Angeles, Calif.

Sales Representatives

Tulsa, Okla. 409 Atlas Life Bldg.
Amarillo, Tex. 1501 Polk St.
Houston, Tex. 219 Post Dispatch Bldg.
Wichita Falls, Tex. 232 Bob Wagoner Bldg.

Common Products Uncommonly Good

In addition to our Stores at Shreveport, Haynesville, Norphlet and Smackover, The Mutual Supply Company, 503 Washington St., Houston, Texas, carries a stock of such PELCO Products as: Bailers—Bailer Tops and Bottoms—Bits, Fishtail — Clamps, Anchor and Casing—Casing Heads, La. Pattern Stuffing Box—Collars, Forged Steel Drill—Cutters, Inside Casing—Devices, Liner Setting "J" Tool Type—Rotary Fishing Tools—Hooks, Safety Sucker Rod and Tubing—Joints, Rotary Tool—Nipples, Belled—Nipples, Extra and Double Extra Strong, for drilling — Packers, Canvas and Burlap collapsible—Packers, Rope—Seals, "J" Tool Lead—Shoes, Forged Steel Drive and Set—Shoes, Tool Steel Rotary—Strainer, Water Well—Tongs, Break-Out, Etc., Etc.

M. Ind. Rgtrda. PELCO TRADE Reg. U. S. Pat. Office

Watch Fobs Free

(*miniature PELCO Bits*)

ALTHOUGH there are any number of producers who wouldn't use any other kind if you'd give them a carload, there probably isn't anything we could say about PELCO Fishtail Bits that would induce you to order one.

But if you'll write for a fob, using company stationery, we'll send it along. You'll see other men wearing them, and it will all contribute to your interest in the subject.

Then one day you'll step onto a derrick floor where only PELCO Bits are ever permitted and you'll feel that you are not a total stranger to the reason why.

They sell for more money than ordinary fishtail bits, for the very good reason that they are harder and tougher than ordinary fishtail bits and remain that way under the none-too-gentle treatment of the tool dresser.

They are sold with the understanding that your money will be refunded if they don't make more hole per bit and more hole between redressings than any other fishtail bits you ever used.

Write for a fob. It will keep you reminded.

Pelican Well Tool and Supply Co.

Shops and General Offices, Lake and McNeil Streets, Shreveport, Louisiana
Private Branch Exchange Numbers 3255-3256-3257-2-2254

Shops and Store, Haynesville, La.
Telephone 162

Store at Norphlet, Arkansas
Telephone 10

Store at Smackover, Arkansas
Telephone 29

Users Know the Difference!

Here is what an Expert Finds Out About Reading Casing and Tubing.

605 Nebraska Ave.,
Long Beach, Calif.,
August 5, 1926.

Mr. A. F. McClintock,
826 Van Nuys Bldg.,
Los Angeles, Calif.

Dear Sir:

In regard to the different Reading Iron Co. products used in the wells on the W. R. Ramsey properties, in the Long Beach Field, California, and the reasons for using these products, I will state as follows:

There were fourteen wells drilled in all, and of these thirteen were equipped with Reading tubular goods, 8¼" for water strings, 6¼ and 4½ for oil strings and 2½ and 3" tubing. We felt, that due to the unknown qualities of the surface and deep waters, it would be the best policy to use a material which we knew would resist corrosion to the greatest possible extent. It was for this reason primarily that we decided on the exclusive use of Reading iron for our water strings and in most cases for our oil strings as well, on account of the ultimate encroachment of edge waters in the oil sands. We found the best kind of workmanship in the couplings and threads, and very few joints had to be laid down.

In the thirteen wells equipped with Reading Casing we did not fail in a single water shut-off and up to the time of Mr. Ramsey's sale of the property, June 1, 1926, we had not had a water string show signs of leaking.

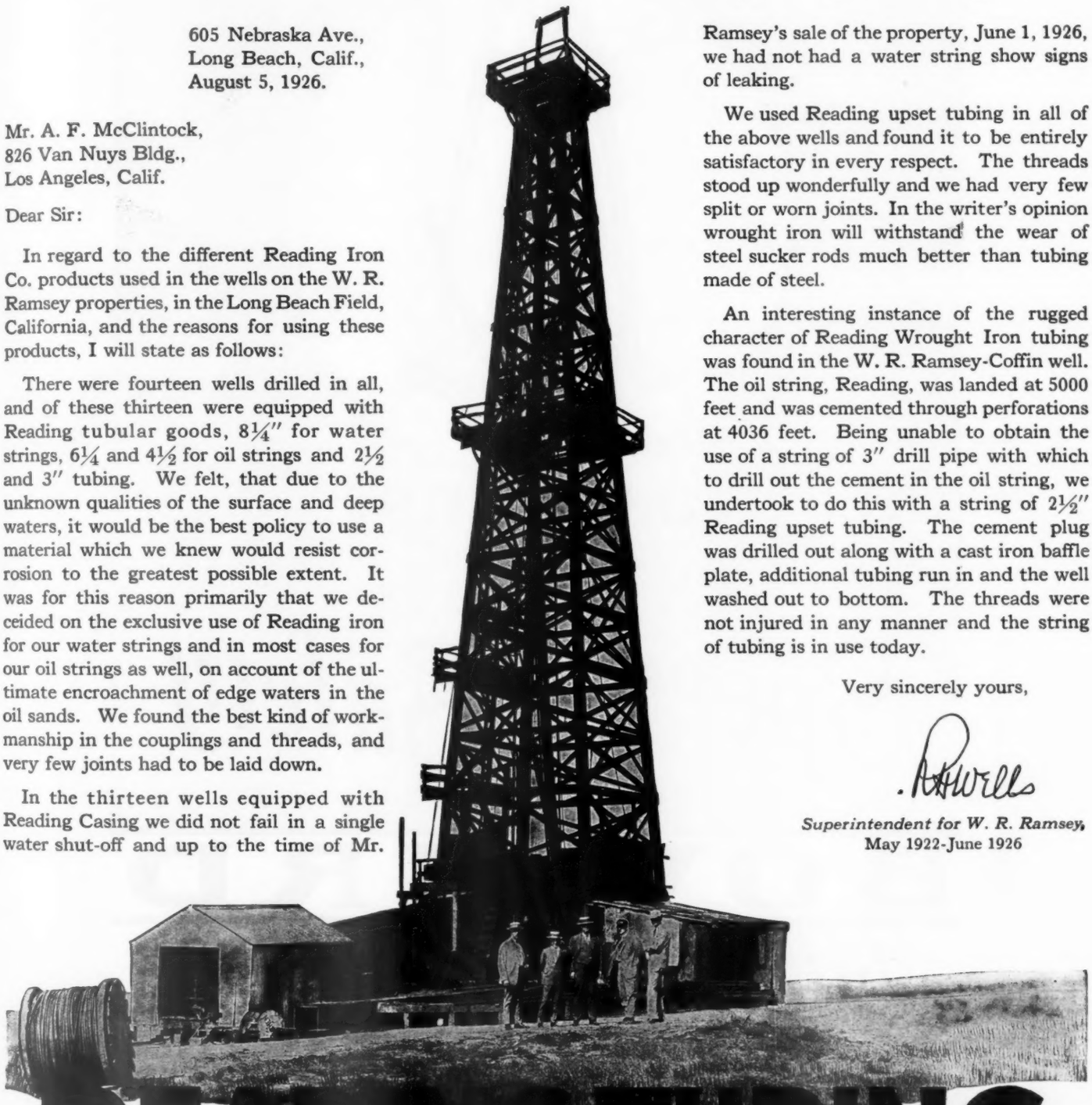
We used Reading upset tubing in all of the above wells and found it to be entirely satisfactory in every respect. The threads stood up wonderfully and we had very few split or worn joints. In the writer's opinion wrought iron will withstand the wear of steel sucker rods much better than tubing made of steel.

An interesting instance of the rugged character of Reading Wrought Iron tubing was found in the W. R. Ramsey-Coffin well. The oil string, Reading, was landed at 5000 feet and was cemented through perforations at 4036 feet. Being unable to obtain the use of a string of 3" drill pipe with which to drill out the cement in the oil string, we undertook to do this with a string of 2½" Reading upset tubing. The cement plug was drilled out along with a cast iron baffle plate, additional tubing run in and the well washed out to bottom. The threads were not injured in any manner and the string of tubing is in use today.

Very sincerely yours,

R. H. Wells

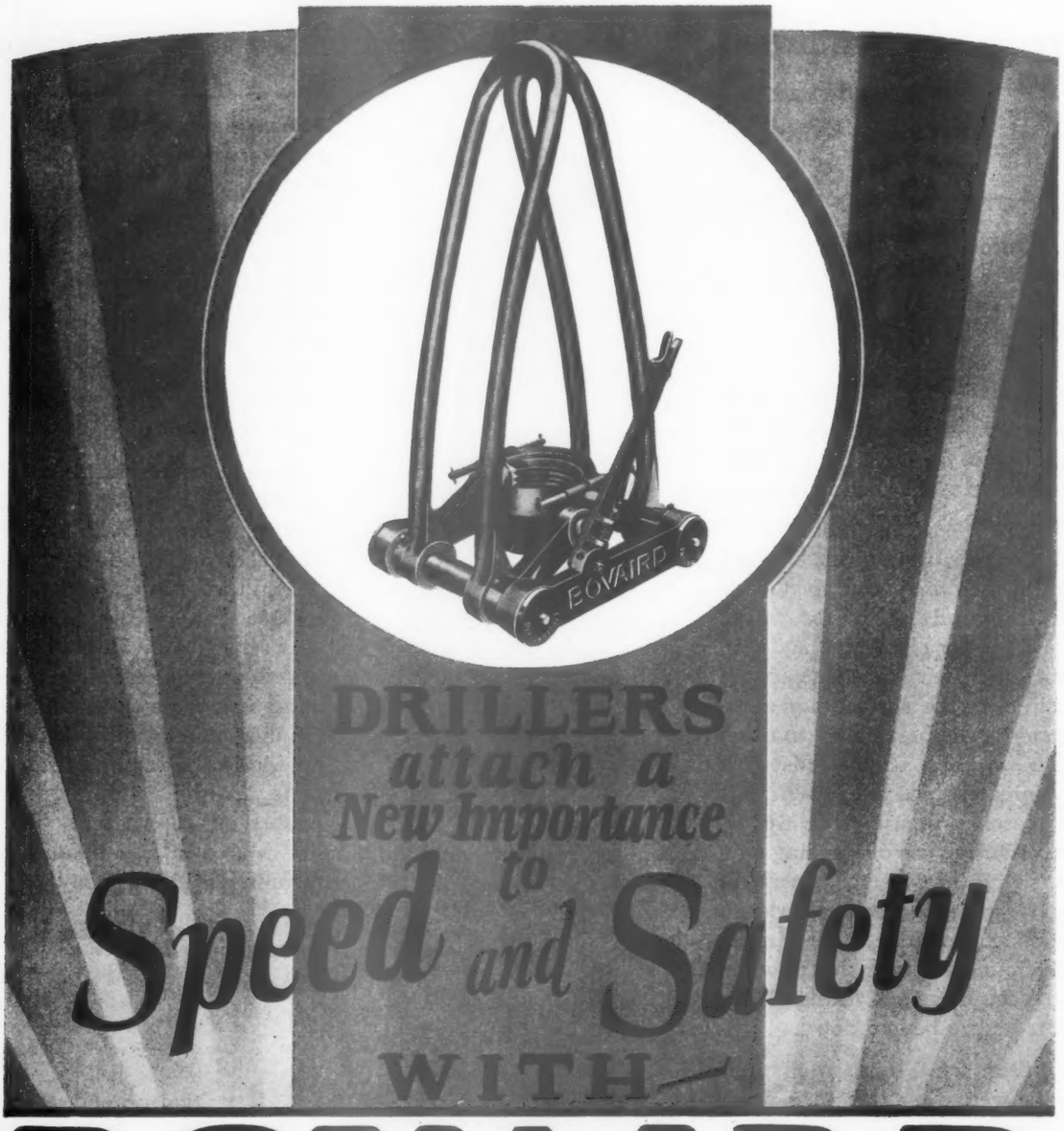
Superintendent for W. R. Ramsey,
May 1922-June 1926



READING TUBING

GENUINE WROUGHT IRON

READING IRON COMPANY HOUSTON, TULSA, SHREVEPORT, LOS ANGELES READING, PENNSYLVANIA



DRILLERS
attach a
New Importance
to
Speed and Safety
WITH—

BOVAIRD

Grip CASING ELEVATORS

—FOR SALE BY ALL LEADING SUPPLY HOUSES—
904 Mid-Continent Bldg.—Tulsa, Oklahoma

8 months! 24 hours a day! Never oiled-adjusted or serviced!

The Self-lubricating WICO TEST MAGNETOS— are still running!

THINK of it—a magneto that will stand oil field use without attention—that oils itself automatically—eliminating the human tendency to forget oil or oil too well.

For a year we tested it in our laboratories—then we sent more than fifty test magnetos into the field—and waited! Days—weeks—months have passed—the self-lubricating OC has proved itself.

EVERY OIL MAN WILL want these facts. They mean added production, and fewer shut downs. Mail the coupon for full information.

—Yes, Your Present Type OC Wicos Can Be Converted

All the features of this improved Wico can be added to your present Type OC magnetos. Next time your magneto is to be repaired instruct our branch at Tulsa to convert it. This adds but one dollar to the cost of the repair.

This Coupon Will Bring You the Whole Story

WICO ELECTRIC CO., Springfield, Mass.
Send me full details regarding the new OC Magneto
We operate ..... (quantity) ..... Type OC Wico Magnetos.
Name .....
Company .....
Position .....
City .....
County .....
State .....

WICO ELECTRIC CO. - - SPRINGFIELD, MASS.

FACTORY BRANCH: 121 WEST EIGHTH STREET, TULSA, OKLA.

Length 62 feet.
Diameter 10 feet.

WELDED PRESSURE VESSELS

**Limited to size only by transportation requirements—
Wall thickness up to 3½″ and heavier**

P. I. W. Welded Pressure Vessels are the product of the same organization which has specialized for more than 35 years in tankage and steel plate construction for the Oil Industry.

Designed especially for the Oil Industry needs and brought into production only after the most exacting and painstaking tests, P. I. W. pressure vessels are establishing new standards of accuracy and strength coupled with minimum upkeep and low first cost.

Write for literature describing an unusual test of P.I.W. Welding.

P.I.W.
STEEL PLATE CONSTRUCTION

Plants:
**Sharon, Pa., and
Beaumont, Texas.**

THE
PETROLEUM IRON WORKS
COMPANY
NEW YORK CHICAGO
SHARON, PA.
HOUSTON TULSA

Why These Plants Use *Softened* Water

Sinclair Oil & Gas Company
Phillips Petroleum Company
Globe Gasoline Company
Marine Refining Company
Schaeffer Oil & Refining Co.
Amerada Petroleum Corporation
Wentz Oil Corporation
The Empire Companies
Gilmore Oil Company

—all of which are equipped with Paige-Jones Upward Flow Zeolite Water Softeners.

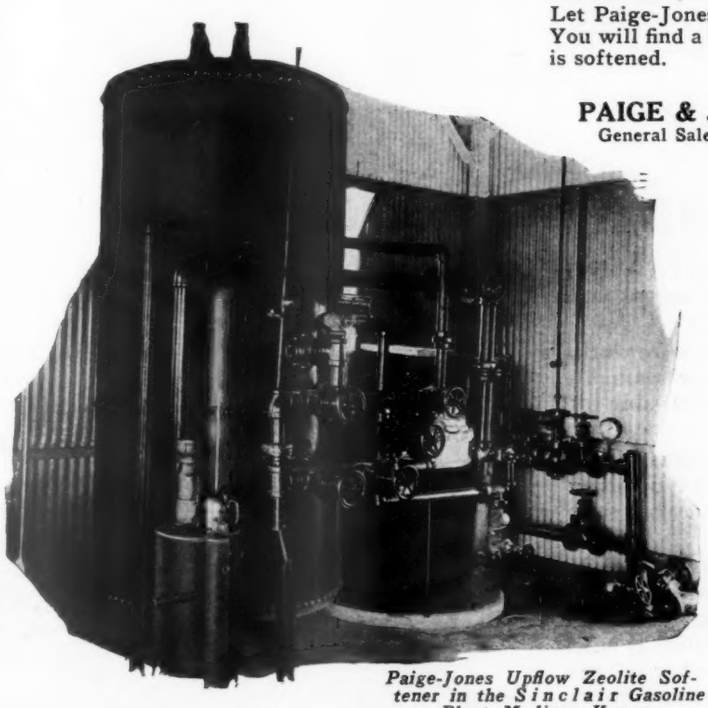
Most natural gasoline plants seem to have landed where hard water is the rule rather than the exception.

As a result, they face added production burdens and higher costs.

But many have overcome their troubles by softening the water—condensing is better controlled, coils are much cleaner, cylinder heads do not crack.

The cost of providing soft water is moderate—the benefits many.

Let Paige-Jones engineers fix up your water supply. You will find a big improvement if the cooling water is softened.



Paige-Jones Upflow Zeolite Softener in the Sinclair Gasoline Plant, Madison, Kansas.

PAIGE & JONES CHEMICAL CO., Inc.
General Sales Office, Technical Dept. and Works:
HAMMOND, IND.

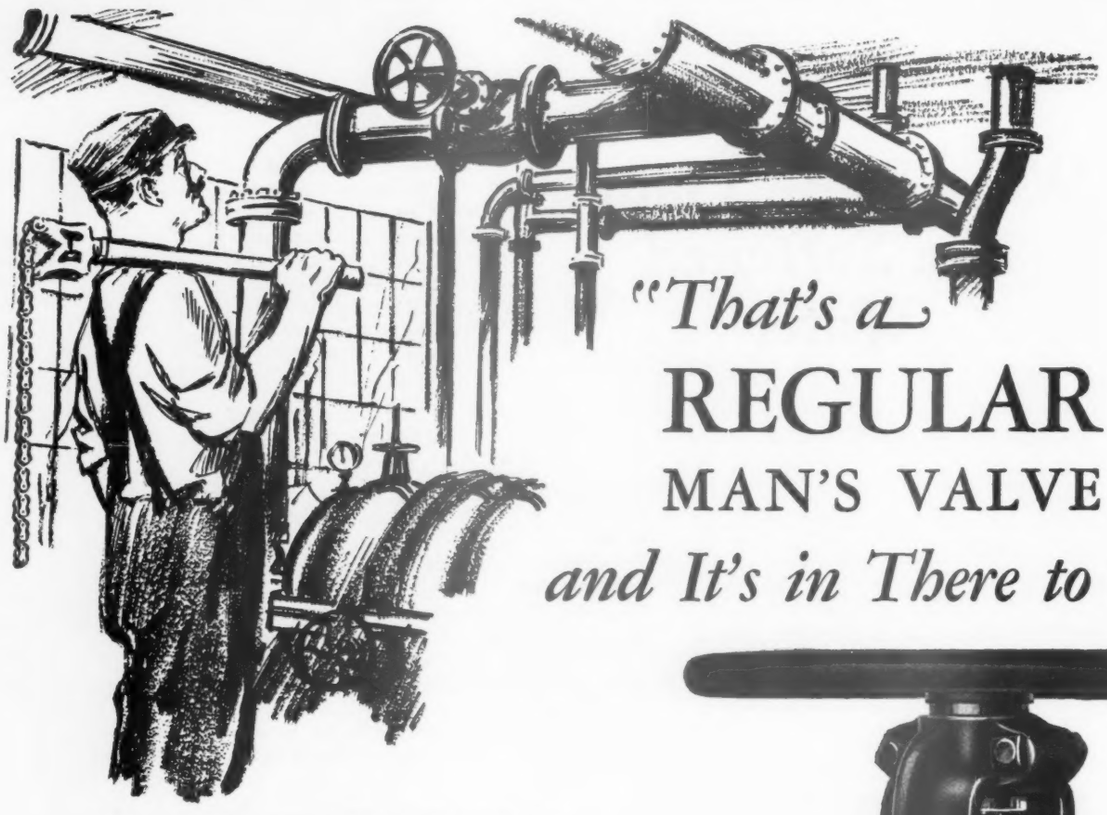
Executive Office:
461 Fourth Ave., New York
Offices in Principal Cities

Be Assured Of Paige-Jones Economies

Paige-Jones originated and developed the rapid-rate *upward flow* zeolite softener. This is by far the more economical zeolite system.

PAIGE-JONES WATER SOFTENING

ZEOLITE AND LIME SODA SOFTENERS · PRESSURE SAND FILTERS
BOILER FEED WATER TREATMENTS · HOUSEHOLD WATER SOFTENERS



"That's a

REGULAR

MAN'S VALVE

and It's in There to Stay"

"It's There TO STAY"

—You and your men can say with Satisfaction, as you Install an OIC 250-pound Extra Heavy Wedge Gate Valve.

"EXTRA-HEAVY" when applied to an OIC Valve, means exactly the same that "Oversize" means in a reliable make of automobile tire.

It is the maker's pledge that he has put *more* work, *more* material, *better* material, *more* time, *more* thought, into giving the purchaser and user maximum value for his investment.

And, many times, the manufacturer is actually able to give you all this extra value at little or no extra cost—simply because public demand creates big sales and encourages production economies.

OIC Extra Heavy Wedge Gate Valves—made in various types of which the one illustrated is a good representative—give you the kind of service that represents real economy in the long run. The price is most reasonable, quality considered. Of semi-steel, with hard metal seats, they are recommended for saturated steam up to 250 pounds or superheated steam up to a maximum total temperature of 500 degrees.

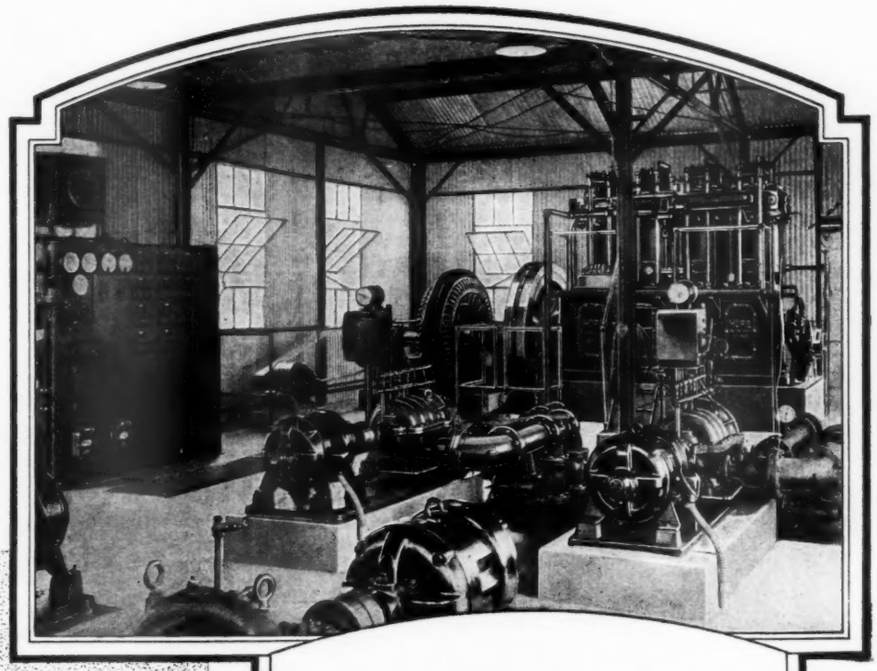
These are just a few items in our complete line of OIC Valves for the Petroleum Industry. May we send our 277-page Catalog and full particulars?

THE OHIO INJECTOR COMPANY

WADSWORTH, OHIO

OIC Valves are Carried in Stock and Distributed in the Mid-Continent Field by International Supply Co., Tulsa, Oklahoma, and Branches.

OIC



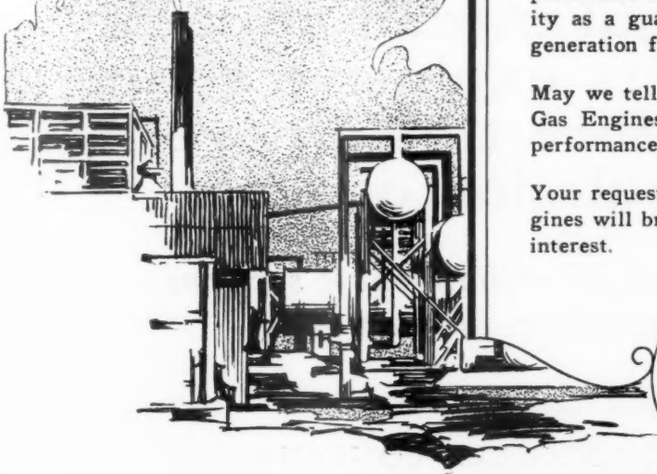
HOPE
GAS ENGINES
for
Dependable Power

If the judgment of the men responsible for the planning of the more recent and model main line gas compressor stations is sound —if the performance record of the equipment of their choice is any guide—

There is every reason for your decided preference for Hope Gas Engine reliability as a guarantee of trouble-free power generation for driving the auxiliaries.

May we tell you, in detail, of what Hope Gas Engines are doing—and where their performance in the field tells the story?

Your request for information on these engines will bring you Specification Data of interest.



H E-41

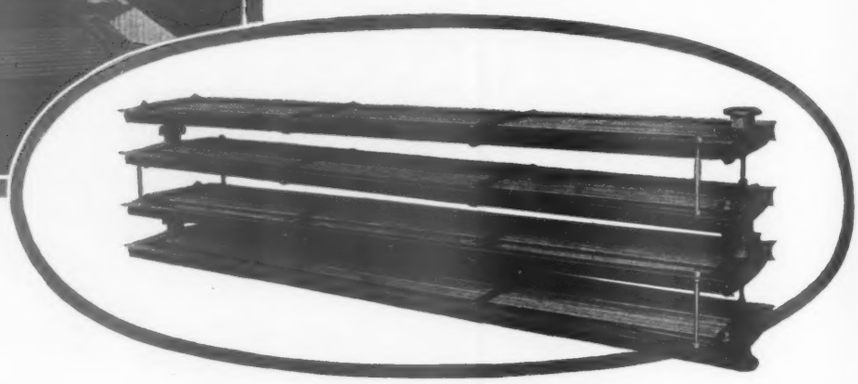
ENGINEERS
CONTRACTORS

HOPE
ENGINEERING AND SUPPLY
COMPANY

DESIGNERS
MANUFACTURERS

MOUNT VERNON, OHIO, U.S.A.
DALLAS, TEX. TULSA, OKLA. CASPER, WYO.

Typical Installation of G-R Bentube Section



The G-R Bentube Section

maintains guaranteed capacity because of its exclusive scale-shedding feature that prevents heavy accumulation of scale

Built in standard, interchangeable sections for immediate shipment

Send for bulletin

THE GRISCOM-RUSSELL COMPANY

285 Madison Avenue

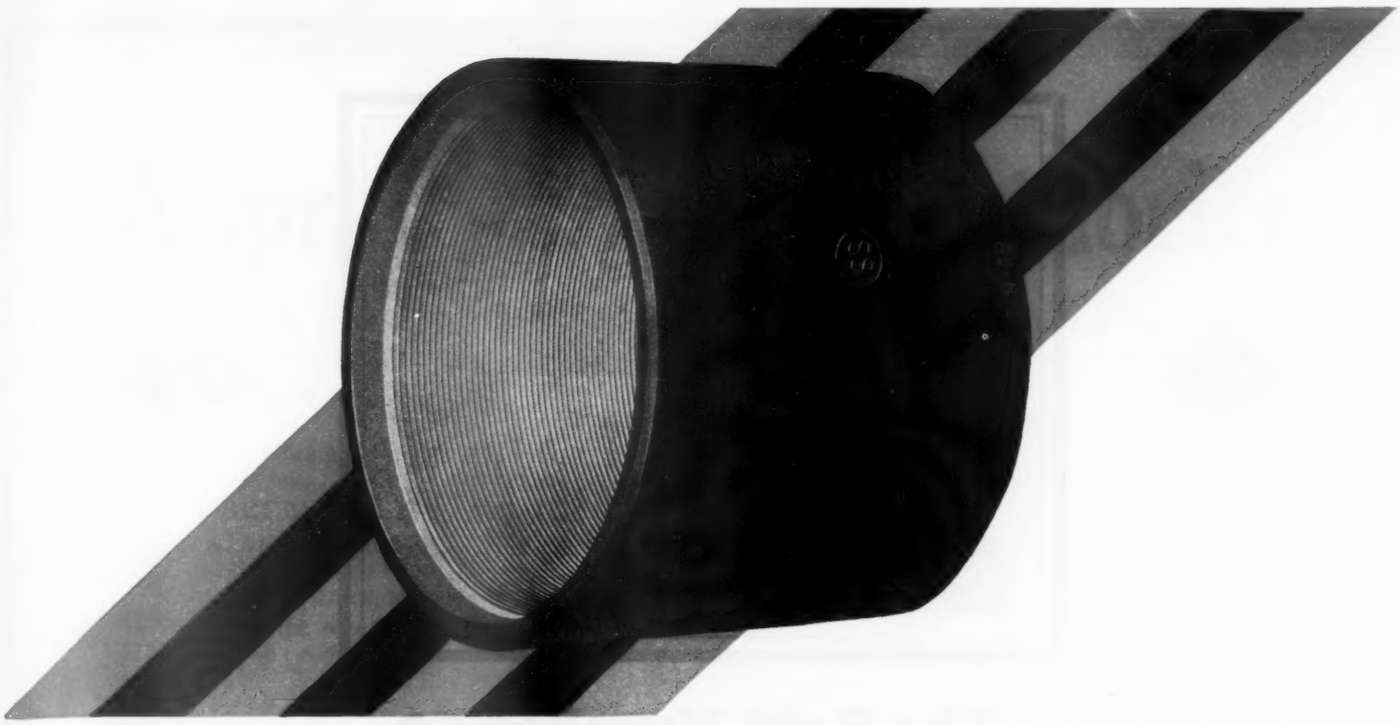
Philadelphia	Chicago	St. Louis	San Francisco
Boston	Detroit	New Orleans	Los Angeles
Rochester	Cleveland	Dallas	Seattle
Pittsburgh	Milwaukee	Houston	Salt Lake City
Columbus	Minneapolis	Atlanta	Tulsa
Indianapolis	Kansas City	Charlotte	Denver

For Canada: Riley Engineering and Supply Co., Ltd., Toronto

Griscom-Russell

Heat Transfer Apparatus

HEAT EXCHANGERS
CONDENSERS
Sub-cooling—Partial—Reflux
COOLERS
Liquid—Gas—Jacket Water
OIL HEATERS
LEVEL CONTROLLERS



ACCURATE

UNIFORM

Fitting Pipe for Re-Run

There are only two standards for threading casing, Briggs and A. P. I. The Smithsteel Couplings are threaded absolutely accurate to either one or the other of these standards according to specification. Pipe cut to fit the Smithsteel Coupling automatically gives you the standard with resulting accurate thread engagement.

When the re-conditioned pipe is put on the rack for re-running, this accurate thread engagement and the uniform Smithsteel wall thickness makes running the casing easier and safer.

That is why many oil companies are specifying Smithsteel Couplings on all reconditioned pipe and why many machine shops are adopting Smithsteel Couplings for all pipe that they re-condition.

If you have not used them, send for our new booklet "Smithsteel Couplings," and you will see why they have become the standard for use on both new and re-conditioned pipe for casing.

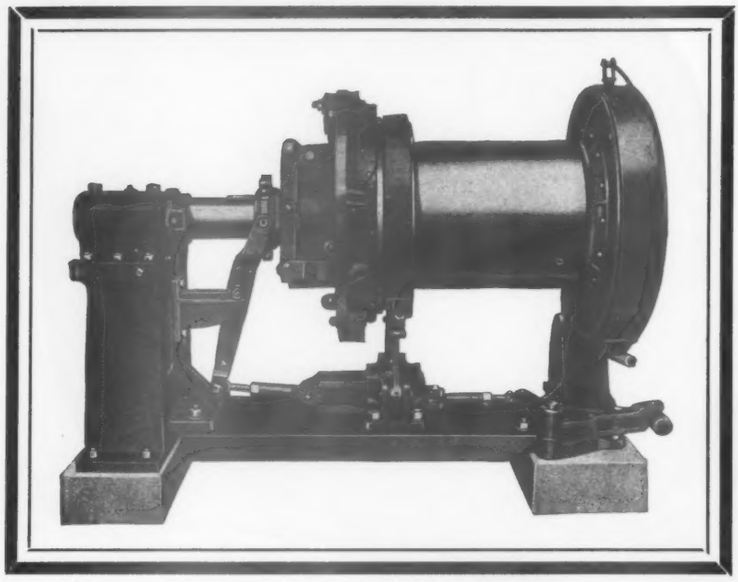
A. O. SMITH CORPORATION

Coupling Division—Milwaukee, Wis.

508-509 Mid-Continent Bldg., Tulsa, Okla.
1701 Magnolia Bldg., Dallas, Texas
633-634 Oliver Bldg., Pittsburgh, Pa.

SMITHSTEEL COUPLINGS

The Standard of the Oil Fields for Reconditioning Pipe



The Reid Number 50
HEAVY DUTY
Reverse Clutch

THIS NEW REID Reverse Clutch is for use with heavy duty engines, including the high speed gasolene types. Its great strength and precision, typical of all Reid oil country machinery, make it safe and reliable in transmitting the power of the larger engines now being used.

Its 74¼" solid steel shaft is 5" in diameter, turned and ground. Heavy steel double flanged coupling.

The steel reversing gears and pinions are completely enclosed and operate in a bath of oil. Heavy duty 24-inch Friction Band Clutch.

The brake wheel is thirty inches in diameter, which affords generous braking surface for the heaviest duties. The heavy pulley is of cast iron with a 20" face and your choice of diameters from 18" to 36". The pulley is equipped with a pulley brake so that it may be held at any position.

Forward, reverse and braking positions controlled by one lever.

The pulley runs on bronze bushings, the brake wheel on cast iron. Ample provision for lubrication.

Frick-Reid
Supply Co.

Tulsa, Okla. Pittsburgh, Pa.

West of the Mississippi, Stores Everywhere
East of the Mississippi, The Frick & Lindsay Co.

Axelson Machine Co.
Sucker Rods, Pull Rods, Plunger Working Barrels (Pumps) etc.

Beaumont Iron Works Company
Dreadnaught Rotary Equipment, Water-Cooled Draw works, Pumping Hoists, Traveling Blocks, etc.

Carbic Manufacturing Company
Acetylene Gas Generators and Welding Equipment.

Donovan Boiler Works
Oil Country Boilers and Tanks.

Frick-Reid Service Belting
Rubber Covered and Friction Surface.

Jensen Bros. Mfg. Co.
Pumping Jacks.

National Transit Pump and Machine Co.
Power and Steam Pumps.

J. P. Ratigan
Grips, Clamps, Beam Hangers.

Joseph Reid Gas Engine Co.
Gas and Oil Engines, two and four-cycle, Band Wheel and Direct Drive Pumping Powers.

Whitlock Cordage Co.
Manila Cordage, including Frick-Reid Manila Bull Ropes—same quality for ten years.

Lapweld and Seamless Tubular Goods

Walworth Company
Valves, Fittings and Tools for Steam, Water, Gas, Oil and Air.

Rossendale-Reddaway Company
"Camel Hair" Belting, Belt Clamps.

Appraised by an Authority

The name of A. Beeby Thompson of London is familiar to the oil industry the world over. When this noted consulting engineer volunteers his opinion of the value of The Oil and Gas Journal it is appreciated.

A. BEEBY THOMPSON & PARTNERS.
A. BEEBY THOMPSON,
M. I. Mech E., M. Inst. M. M., F. G. S.
HUBERT MAY, M. I. Mech. E., M. Inst. M. M.
ARTHUR A. ASHWORTH,
M. A., A. M. I. C. E.

18, ST. SWITHIN'S LANE,
LONDON, E. C. 4.

July 26, 1927.

The Oil and Gas Journal,
Tulsa, Oklahoma, U. S. A.

You have no idea how much we technical people appreciate your publication on this side, it contains a mass of valuable information and allows us to follow events in America nearly as closely as if we lived in the country.

If it would be of interest to you I might occasionally send you a few notes on European oil field developments where the modest scale of operations appears ridiculous when compared with progress on your side. Your people usually drain a field in less time than we take to think over a start here.

Yours faithfully,

A. BEEBY THOMPSON.

ORDER BLANK

The Oil and Gas Journal, Tulsa, Okla.

You are hereby directed to mail The Oil and Gas Journal to me for ..... year. Enclosed find remittance $ .....

Classify my interests as checked by me.

..... Producing ..... Refining
..... Equipment ..... Marketing
..... Transportation

Name .....

Address .....

City .....

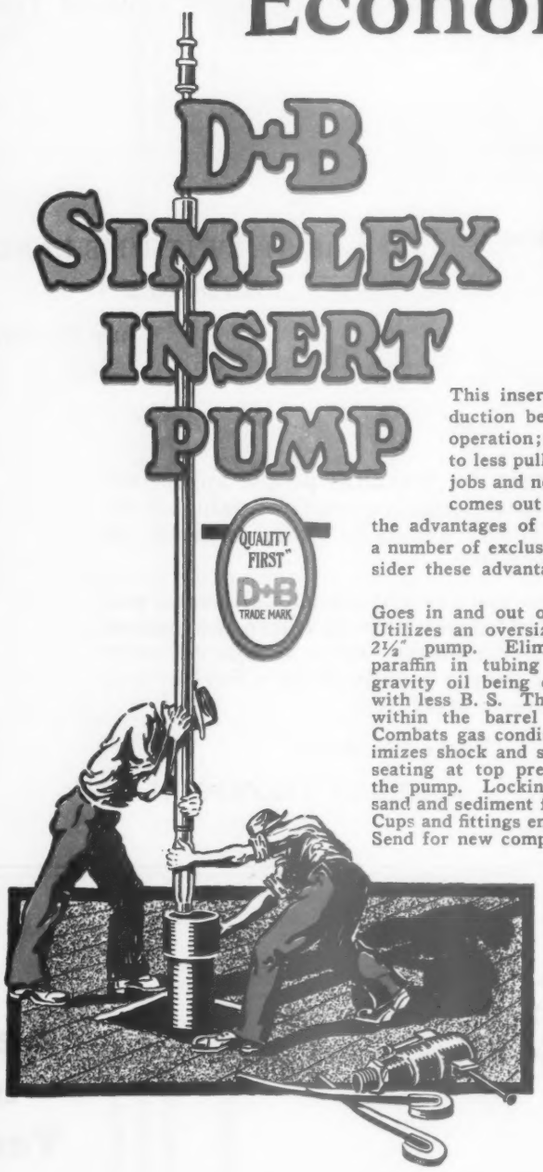
U. S. OR MEXICO	
One Year	$6.00
Six Months	3.00
Three Months	2.00
FOREIGN	7.00

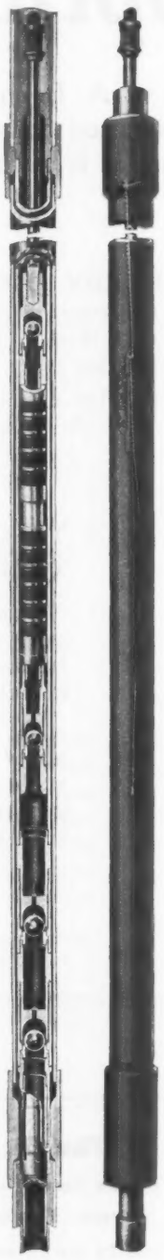
Keep in Touch by Using This Coupon

Results *plus* Economy

D+B SIMPLEX INSERT PUMP

Pulls with the rods





This insert pump will increase production because of more continuous operation; give greater economy due to less pulling of rods; has fewer cup jobs and no pulling jobs, as the pump comes out with the rods. It has all the advantages of pull-out type pumps, plus a number of exclusive D & B features. Consider these advantages:

Goes in and out of the well with the rods. Utilizes an oversize valve—a 3" valve in a 2¼" pump. Eliminates oil churning and paraffin in tubing which results in higher gravity oil being delivered to the lead line with less B. S. There can be no sand cutting within the barrel and no "back slippage." Combats gas conditions and gas locks. Minimizes shock and strain on the rods. Barrel seating at top prevents sand from entering the pump. Locking device and packer keep sand and sediment from settling around pump. Cups and fittings enclosed and fully protected. Send for new completely descriptive folder.

Balanced in construction to lift the load and keep it coming. Particularly adapted to pumping oil at extreme depths, and because oil is kept moving, sand has no opportunity to settle.

D&B PUMP AND SUPPLY CO.

LOS ANGELES, CALIF. DALLAS, TEXAS.

BRANCH STORES.

TORRANCE, TAFT, COALINGA, BAKERSFIELD, SIGNAL HILL, HUNTINGTON BEACH & SANTA FE SPRINGS, CALIFORNIA

Drilling Tools Designed Right, Will Drill More

faster
easier
straighter

Deep Drilling in W. Va.

By A. L. Taylor and J. P. Davis

(Hope Natural Gas Co.)

TO PREVENT CROOKED HOLES

"We have had better success straightening up crooked holes at our deep tests with Spiral Star Bits which are made for different size holes. When drilling in sections where formations are slanting, crooked holes may be avoided by using these special Star Bits."

(Extract from Oil and Gas Journal of June 16, 1927)

LEIDECKER
SPIRAL BITS

Patented
Other Patents
Pending

Mid-Continent Distributors

The Bovaird Supply Company

Stocks at Tulsa, Sapulpa, Beggs, Bristow and Seminole, Oklahoma, Independence, Kansas, and Borger, Texas

Sold by all Supply Houses

Manufactured by

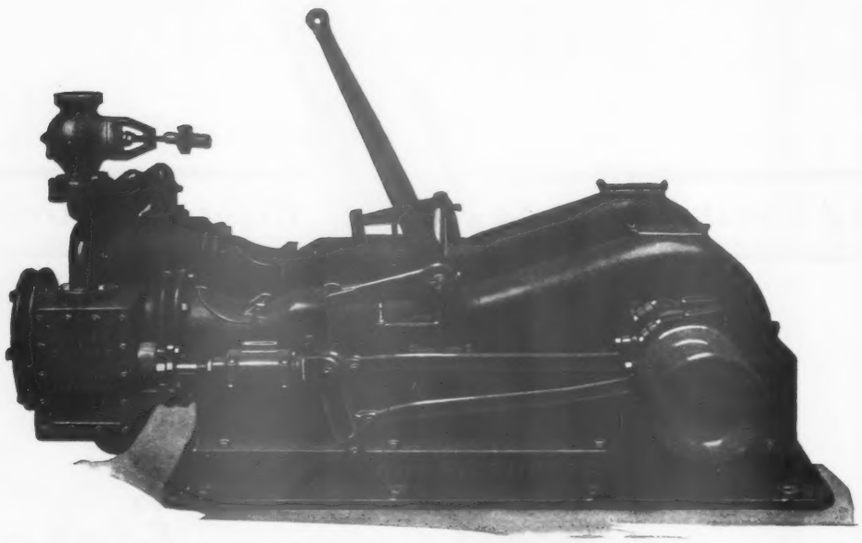
The Leidecker Tool Co.

Marietta, Ohio

Branches: Casper, Wyoming, Bartlesville, Okla., Basin, Wyoming

Export Office—90 West St., New York

Obviously, Your Drilling Engine Should Be the Best



The Gumbo Buster Twin Drilling Engine

The eccentric blocks and straps, the eccentric blades, the valves, steam chest and all valve mechanism are on the *outside* of the engine where adjustment can be easily and quickly made. Should engine chain break or jump the sprocket the valve mechanism cannot be harmed.

No. 2 of a series of ads on the Gumbo Buster Twin Engine each featuring a point of superiority.

Other Advantages:

1. Cathead for setting up and tearing down.
2. Oil Bath.
3. Ample power, eliminating jerk and strain.
4. Solid forged steel double throw crank shaft.
5. Four main bearings.

"Republic"
Tubing
Casing
Line Pipe
Drive Pipe
Rotary Drill

Sold Exclusively By

Republic Supply Company

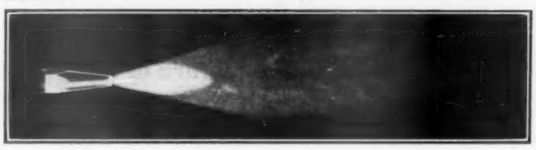
OIL AND GAS WELL SUPPLIES
ROTARY AND CABLE TOOLS

How to Stellite wearing surfaces

STELLITING means depositing a layer of Haynes Stellite on metal wearing surfaces. It increases the life of wearing parts from three to five times. It can easily be done in your own shop by the oxy-acetylene process—as described below.

1 Start with a clean surface by grinding, machining or filing it till free from oxide and scale. Avoid sharp corners in preparing the metal for stelliting.

2 Preheat the base metal in the neutral oxy-acetylene flame just as in ordinary welding. Then, while depositing Stellite, change the flame to an *excess* acetylene flame.



Excess Acetylene Flame

3 If the base metal is forged or rolled steel, do not actually melt it, but bring it to a sweating heat. Then bring a rod of Haynes Stellite to its fusion point and flow a coating of Stellite over the sweating surface. If possible, deposit the proper depth of Stellite with one pass of the torch. If the base metal is cast iron, apply one layer and then build up with the reducing flame. Use no flux except on very dirty cast iron—then use cast iron flux.

4 With the proper flame adjustment, Stellite will flow ahead of the flame, as in bronze welding or brazing. If it does not spread rapidly, the base metal is not hot enough.

5 All specks of scale must be floated. (If the base metal is a steel casting, a slightly higher heat is necessary to float off the scale.) Avoid puddling and penetration, as this results in diluting the Stellite with iron; but be sure that the base metal is brought to a sweating heat in order to obtain a proper bond. Pinholes in the deposited metal are caused by using too little acetylene in the flame or by covering up particles of oxide or scale.

6 Use the same cooling procedure as in ordinary welding. When it is necessary to toughen the steel base, quench the Stellited parts in oil—not water.

Our booklet, "Stelliting of Metal Parts," explains the application of this process in more detail, and our District Sales Offices are prepared to assist and instruct your welders.

HAYNES STELLITE COMPANY

Unit of Union Carbide and Carbon Corporation

UCC

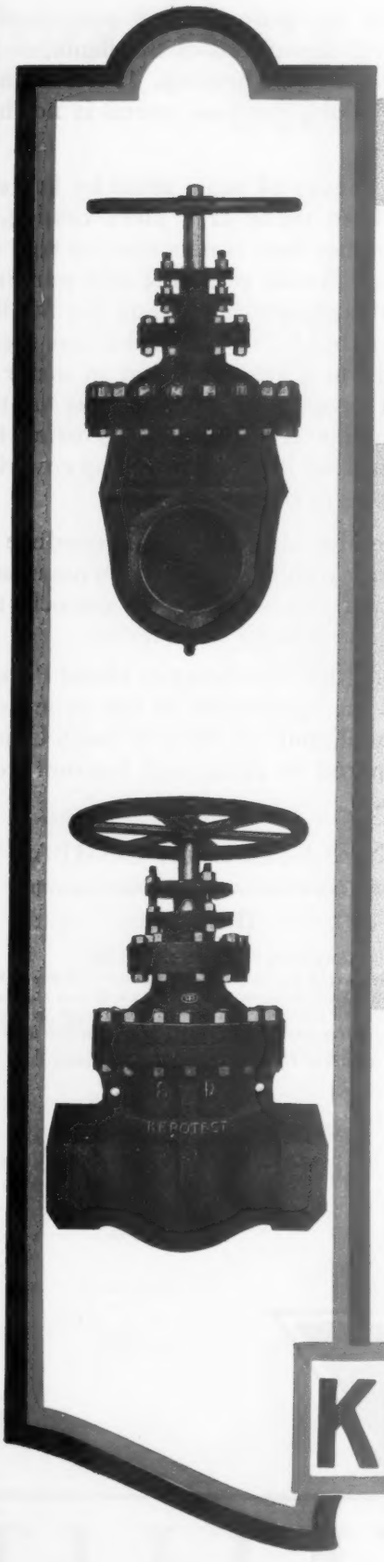
DISTRICT SALES OFFICES

Chicago—*1949 Peoples Gas Bldg.* Los Angeles—*1310 Santee Street*
Cleveland—*628 Keith Building* New York—*30 East 42d Street*
Detroit—*4-240 Gen'l Motors Bldg.* San Francisco—*114 Sansome St.*
Houston—*6119 Harrisburg Blvd.* Tulsa—*Exchange Nat. Bank Bldg.*

General Offices—Kokomo, Indiana

Stelliting with

HAYNES STELLITE



"A solution to your valve troubles"

You can't afford to make your well the testing laboratory of untried valves. They might have all the earmarks of a good valve yet hidden in the texture of the steel may be a defect that may cause it to give way at a critical moment.

Kerotest Valves eliminate all such possibilities because they are given the famous Kerosene test at 3000 pounds pressure, then certified by an independent laboratory testing organization before being shipped to the oil fields.

Thus, with every Kerotest Valve you get a certificate of inspection showing that your Kerotest is tried and true,—you know beforehand that a Kerotest will hold down the wildest well.

Kerotest Manufacturing Company
Pittsburgh, • • • Penna.

Carried in stock and sold by

GRINNELL COMPANY OF THE PACIFIC
Los Angeles San Francisco

OIL WELL SUPPLY COMPANY
Oklahoma Kansas Colorado Wyoming

NORVELL-WILDER HARDWARE COMPANY
Houston Beaumont Shreveport Fort Worth

Export Distributors:
OIL WELL SUPPLY COMPANY
Pittsburgh New York Tampico London

KEROTEST
REGISTERED U.S. PAT OFF.

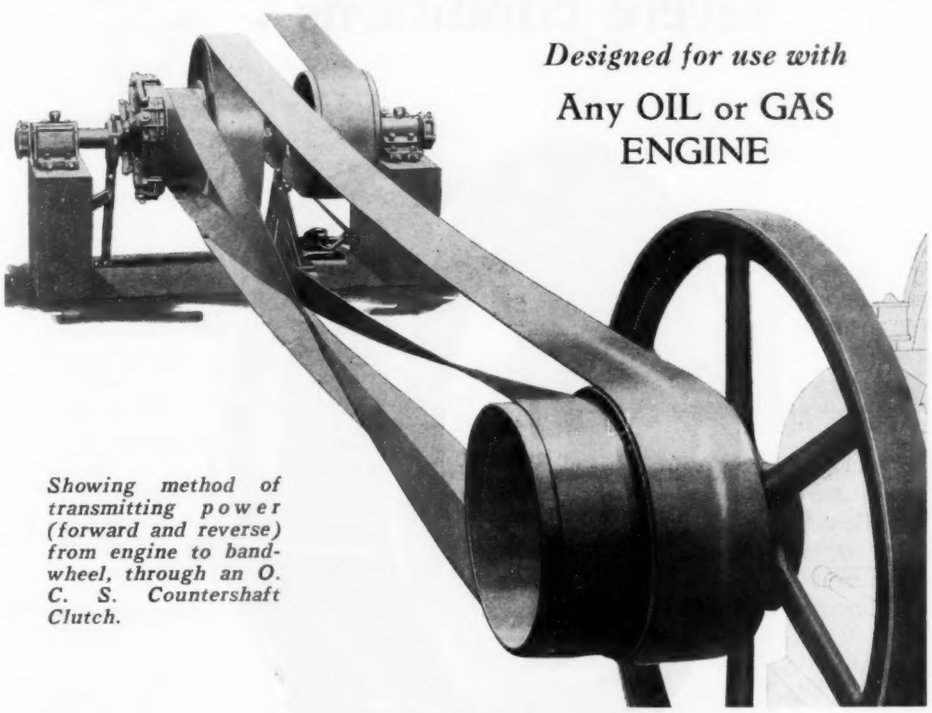
O C S

GEARLESS REVERSIBLE Countershaft Clutches

THE ANSWER TO THE REVERSE CLUTCH PROBLEM—

Designed for use with

Any OIL or GAS ENGINE



Showing method of transmitting power (forward and reverse) from engine to band-wheel, through an O. C. S. Countershaft Clutch.

Manufactured by

THE OIL COUNTRY SPECIALTIES MFG. CO.

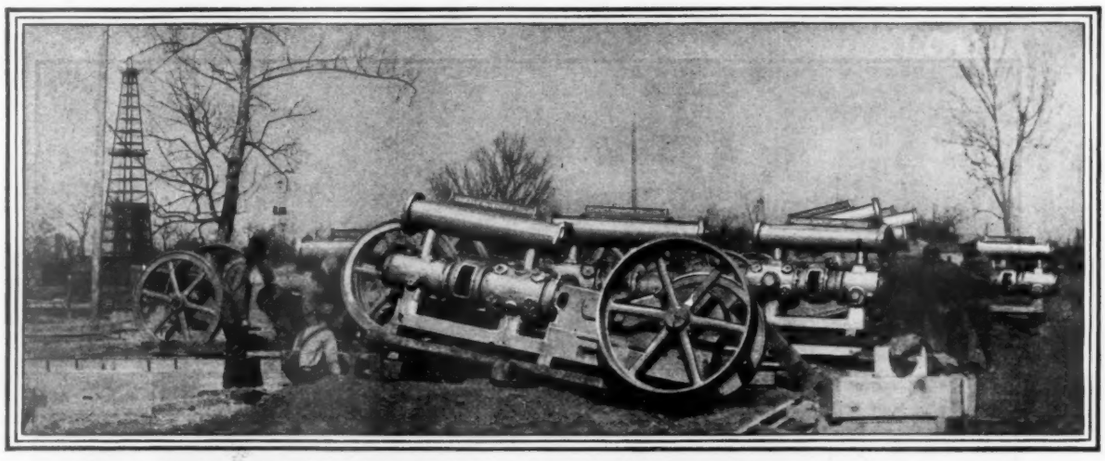
COFFEYVILLE, KANSAS

Write for Bulletin D-48

DAYTON
All Steel Couplings

Assure a permanently tight Plain End Pipe Joint under most severe conditions

THE DAYTON PIPE COUPLING COMPANY



Another Centralized Control Plant. 10 Chicago Pneumatic High-Pressure Compressors at . . . . .

CP Compressors for Oil Field Service

CP Compressor Features:

- Easily installed—simple foundation — often mounted on skids including the motor.
- Easily moved from one location to another.
- Adaptable to battery installations for centralized control.
- Arranged for any form of drive.
- Every CP Compressor is Simplate Valve equipped.
- Wide range of cylinder sizes to select from.
- Machines and parts stocked at convenient points.

YOU can secure a Chicago Pneumatic Compressor in types and sizes to meet any oil-field or refinery requirement, for operation by Oil, Gas, Steam, Belt or Electric Motor.

CP Compressors are all modern and dependable units to meet present day needs for 24 hour service every day if the emergency demands it.

Installation experience in connection with the flowing of wells, has been a hard teacher, as any one having had the work to do will certify. Our oil-field engineers have, on a number of recent installations, determined the size of tubing and placed it at the proper depth on the first run in. Results proved this. This experience is available to anyone having wells to flow.

If you have wells to flow, tanks to erect, pipe lines to lay, refineries or extraction plants to equip, let our oil-field engineers confer with you.

C-262

Chicago Pneumatic Tool Co.

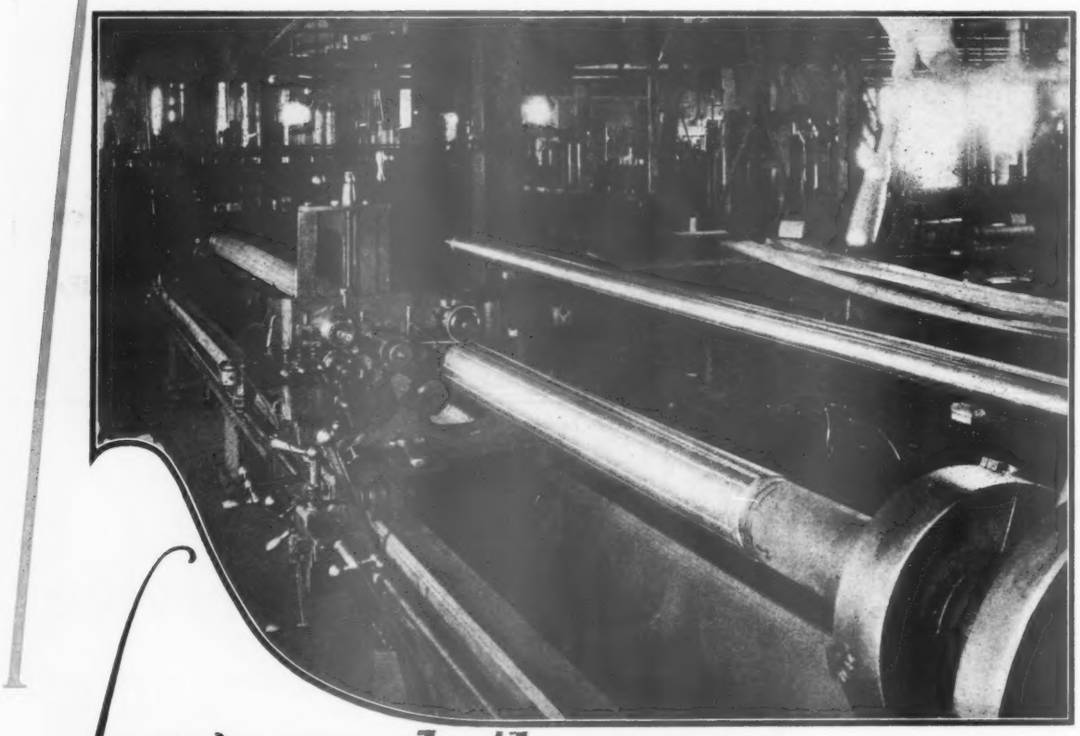
6 East 44th Street, NEW YORK, N. Y.

Sales and Service Branches all over the World.

Whealton & Townsend, Inc., *Authorized Distributors*

Higgins Bldg., Los Angeles — 120 East Brady St., Tulsa; 210 So. Jefferson St., Dallas — 1415 Fannin St., Houston

HONEST RESULTS



have made the name

You Get Maximum Production With Layne Screens

LAYNE

what it is today

Layne Products have given honest results for the last 25 years, and are still giving honest results because they are made on honest principles.

The best of material obtainable, accurate designs, expert craftsmen, and rigid inspections enter into the production of Layne products.

And, Layne products are known throughout the world for their DEPENDABILITY. Write or wire for descriptive literature, prices, etc.

The Layne & Bowler Company

VICKERS, LIMITED
London, England

HOUSTON, TEXAS

THE LAYNE & BOWLER CORP.
Los Angeles, Calif.

No other rod has the milk bottle cap or the Jones thread protector. Threads made to A. P. I. Standards if desired.

JONES SUCKER RODS

GIANT

No matter what thread is used it is only as good as the machine work.

Examine
A Jones Giant Rod
Compare it Carefully—
Ask the man in the field—
And you too will buy
this really better rod.

The Largest Manufacturers of Sucker Rods in the World.

THE S. M. JONES COMPANY.
TOLEDO, OHIO.

Mid-Continent Office: 602 Wright Bldg., Tulsa, Okla.

Gulf Refining Company

OKLAHOMA – TEXAS – LOUISIANA

Refiners of

PETROLEUM

GASOLINE
REFINED OIL
NAPHTHA
GAS OILS
PARAFFINE WAX
PETROLEUM COKE
FUEL OIL
LUBRICATING OILS
CYLINDER
ENGINE
CORDAGE

Red and Pale Paraffine Oils

General Sales Offices: PITTSBURGH, PA.

District Sales Offices:
NEW YORK, HOUSTON, ATLANTA, BOSTON, NEW ORLEANS, PHILADELPHIA, LOUISVILLE

OCEAN TERMINALS

Boston (Beverly), Mass.
Providence, R. I.
New York Harbor (Bayonne, N. J.)
Jacksonville, Fla.
Port Tampa, Fla.
Mobile (Magazine Point, Ala.)
Philadelphia (Girard Point, Pa.)
Charleston, S. C.
Savannah, Ga.
New Orleans (Gretna, La.)
Port Arthur, Texas
Galveston, Texas

The Baker's Dozen!

INVESTIGATE!

How well Watts-Miller Units meet capacity specifications is best shown by the record they have made over a period of years—covering, incidentally, more installations than any make of competitive equipment can account for.

The record—no acceptance test has ever shown Watts-Miller equipment to be over-rated. Never has it failed to show available the full capacity stipulated in the contract.

Consequently, no price adjustment to offset capacity shortages has ever been demanded, nor has the installation of additional units to correct such errors ever been necessary.

On the contrary, the record shows that an actual overage has always been present—ranging from 102½% up to 120% of contract figures.

That is why investors in gas engine and compressor equipment invariably get their "baker's dozen," when they specify Watts-Miller.

The Miller Improved Gas Engine Co.

Tulsa, Okla., Office
323 No. Cheyenne Ave.

Springfield, Ohio

Los Angeles Office
529 Western Mutual Life Building

WATTS GAS ENGINES AND COMPRESSORS **MILLER**

Investigate Before You Buy instead of taking too much for granted.

We welcome any investigation of Watts-Miller Equipment you care to make.

Also consult our engineers at Tulsa, Los Angeles or write direct to Springfield, Ohio.

GOODALL
Semi-Metallic

Goodall Semi-Metallic Hose is unequalled in its ability to withstand high pressures and hard usage. The tube of highest grade rubber resists the excessive wear of sand-laden slush mud. The heavy steel armor holds highest pumping pressures, with a large margin of safety, and protects against all outside wear and damage. Patented Ball Joints make "G. S. M." the most *flexible* metallic hose, and the only one which positively cannot be kinked nor have internal clearance interfered with.

"If CONTINENTAL Sells It, There Is No Better"

THE CONTINENTAL SUPPLY COMPANY
General Offices: St. Louis
Export Office: 74 Trinity Court, New York
London Office: 316-317 Dashwood House, Old Broad St., E. C. 2
THE CONTINENTAL SUPPLY COMPANY, LIMITED
69 Thomas Block, Calgary, Alberta, Canada

CONTINENTAL

The ADVERTISERS' INDEX

A

Acme Fishing Tool Co. 134
Ajax Iron Works 86-87
Ajax Rope Co. 191
Allegheny Steel Co. .....
Allis Chalmers Mfg. Co. 89-90
Aluminum Co. of America 133
Amarillo Hotel .....
American Asphalt Paint Co. .....
American Cable Co., Inc. .....
American Car & Foundry Co. .....
American Hammered Piston Ring Co. .....
American Manganese Steel Co. .....
American Radiator Co. .....
American Roller Bearing Co. 174
American Rolling Mill Co. .....
American Schaeffer & Budenberg Corp. .....
American Sheet & Tin Plate Co. .....
American Spiral Pipe Works .....
American Telephone & Telegraph Co. ..... Inside Front Cover
American Well Works .....
Anderson Engine & Foundry Co. .....
Andrews Steel Co. 185
Arco Company, The 167
Armstrong Bros. Tool Co. 193
Association of Natural Gasoline Mfgrs. .....
Athey Truss Wheel Co. .....
Austin Co. .....
Axelson Machine Co. 122

B

B. & A. Specialty Co. .....
Baash-Ross Tool Co .....
Babcock & Wilcox Tube Co., The .....
Baker Casing Shoe Co. 55
Barber Asphalt Co. .....
Barber-Greene Co. .....
Barco Manufacturing Co. 116
Barnickel, Wm. S. & Co. 191
Barnsdall Refineries, Inc. .....
Barrett, G. E. & Co. 192
Bartlesville Supply Co. 114
Beaumont Iron Works Co. .....
Becker Specialty Co. .....
Benjamin Electric Mfg. Co. .....
Bessemer Gas Engine Co. 92
Bethlehem Steel Co. .....
Biggs Boiler Works Co. .....
Bignall & Keeler Machine Works 177
Blaw-Knox Co. .....
Borden Co. .....
Bovaird & Seyfang Mfg. Co. .....
Bovaird Supply Co., The 10
Braun, C. F. & Co. 163
Bristol Co. .....
Broderick & Bascom Rope Co. 6
Brooks Engineering Corp. .....
Brown, Arthur C. 193
Brown Instrument Co. .....
Brownell Co. 191
Buckeye Traction Ditcher Co. 168
Buda Co. .....
Buffalo Bolt Co. 169
Buffalo Gasolene Motor Co. 4
Burns Tool Co. 141
Burt Corp. .....
Burt Mfg. Co. 174
Butler Mfg. Co. .....
Byron Jackson Pump & Mfg. Co., Inc. ... 2

C

California Pipe Line Machine Co. 176
Cameron Iron Works .....
Campbell, J. A. 80
Canadian Pacific Railway Co. .....
Car'ondale Machine Co. .....
Celite Products Co. .....
Central Alloy Steel Corp. .....
Central Tube Co. 188
Chain Belt Co. .....
Champion Machine & Forging Co. .....
Chaplin-Fulton Mfg. Co. 190
Chapman Valve Mfg. Co. .....
Chestnut & Smith Corp. .....
Chicago Bridge & Iron Works 65
Chicago Pneumatic Tool Co. 27
Chisholm-Moore Mfg. Co. 138
Clark Bros. Co. 66-67-76-77
Classified Wants 142-143
Cleveland Trencher Co., The .....
Climax Engineering Co. .....
Columbian Rope Co. 113
Columbian Steel Tank Co. .....
Columbus Forge & Iron Co. .....
Continental Motors Corp. .....
Continental Supply Co. 32-85
Cook Motor Co., The .....
Cooper, C. & G., Co. 56
Crane Co. .....
Crane Packing Co. .....
Crescent Belt Fastener Co. .....
Crown Central Petroleum Corp. 95

D

D. & B. Pump & Supply Co. 26
Darling Valve & Mfg. Co. .....
Dart, E. M., Mfg. Co. .....
Davis, G. M., Regulator Co. .....
Dayton Pipe Coupling Co. 28
Dearborn Chemical Co. .....
De La Vergne Machine Co. .....
Delta Electric Co. .....
Detex Watchclock Corp. .....
Detroit Graphite Co. .....
Diamond Drill Carbon Co. 192
Dixon, Joseph, Crucible Co. .....
Donovan Boiler Works, Inc. .....
Dresser, S. R., Mfg. Co. 45
Dunn Mfg. Co. 49
DuPont de Nemours & Co., E. I. Inc. ...
Duriron Company The .....

E

Eagle-Picher Lead Co. 3
Eastern Torpedo Co. .....
Eclipse Paint & Mfg. Co. .....
Edward Valve & Mfg. Co. .....
Elliott Core Drilling Co. 187
Empire Refineries, Inc. .....
Emsco Derrick & Equipment Co. .....
Ethyl Gasoline Corp. .....
Exchange National Bank .....

F

Fairbanks-Morse & Co. .....
Federal Supply Co. .....
Fenwick-Reddaway Mfg. Co. .....
Fisher Governor Co. .....
Fluor Construction Co. .....
Foamite-Childs Corp. .....
Fohs, F. Julius .....
Foos Engine Co. .....
Ford Chain Block Co. 178
Foster Wheeler Corp. .....
Foxboro Co., Inc., The .....
Franklin Valveless Engine Co. .....
Frick-Reid Supply Co. 18

G

Gallagher Co. .....
Gardner-Denver Co. .....
Garlock Packing Co. .....
Gasoline Recovery Corp. .....
Gaso Pump & Burner Mfg. Co. ..... Inside Back Cover
General American Tank Car Corp. .....
General Asbestos & Rubber Co. .....
General Electric Co. .....
Gilbert & Barker Mfg. Co. .....
Goodrich, B. F., Rubber Co. .....
Goodyear Tire & Rubber Co. .....
Gott, H. P., Mfg. Co. 188
Goulds Pumps, Inc. .....
Graham Brothers .....
Graver Corp. 101
Gray Processes Corp. .....
Greenspon's, Joseph Sons, Iron & Steel Co. 178
Griscom-Russell Co. 16
Gulberson Corp. 81
Gulf Refining Co. 30
Gustin-Bacon Mfg. Co. .....

H

Halliburton, Erle P., Co. .....
Halliburton Oil Well Cementing Co. 5
Harrisburg Pipe & Pipe Bending Co. .....
Haynes Stellite Co. 23
Hazard Mfg. Co. .....
Heppenstall Forge & Knife Co. 176
Hercules Motors Corp. .....
Hercules Tool Co. .....
Heydrick Mapping Co. 193
Hill, Hubbell & Co. 96
Hills-McCanna Co. .....
Hinderliter Tool Co. 104
Homestead Valve Mfg. Co. .....
Hoover Steel Ball Co. .....
Hope Engineering & Supply Co. 15
Hopkins, Edwin B. 193
Hough, Charles N., Mfg. Co. 107
Hoyt Metal Co. 189
Hughes Tool Co. ..... Back Cover
Humble Oil & Refining Co. .....
Hunt, Robert W., Co. .....

I

Imperial Belting Co. 186
Imperial Brass Mfg. Co., The .....
Imperial Royalties Co. .....
Indiana Truck Corp. .....
Ingersoll-Rand Co. 112
International Derrick & Equip. Co. .....
International Harvester Co. of America. .
International Nickel Co. 130
International Petroleum Exposition 171
International Supply Co. 137

J

Jarecki Mfg. Co. .....
Jefferson Union Co. .....
Jensen Brothers Mfg. Co. 186
Johns-Manville Corp. .....
Jones, S. M., Co. 29

K

Kaw Steel Construction Co. .....
Kellogg, M. W., Co. 179
Kelly, John Eoghan 193
Kelly, Kork 193
Kennedy Valve Mfg. Co. 157
Kerotest Mfg. Co. 24
Keuffel & Esser Co. 192

L

Landis Machine Co. .....
Larkin & Co. .....
Layne & Bowler Co. 28
Leader Iron Works .....
Leidecker Tool Co. 21
Leschen, A., & Sons, Rope Co. .....
Lientz, B. P. & Co. .....
Lincoln Electric Co. .....
Linde Air Products Co. 1
Link-Belt Co. .....
Longyear, E. J., Co. .....
Lubrikup Co., Inc. 191
Lucas, John, & Co., Inc. .....
Lucey Mfg. Corp. .....
Ludlow Valve Mfg. Co. .....
Lufkin Fdy. & Machine Co. .....
Lufkin Rule Co. .....
Lunkenheimer Co. .....

Mc

McCord Radiator & Mfg. Co. 84
McGregor Working Barrel Co. 188
McIntosh & Seymour Corp. .....
McKee, Arthur G., & Co. .....

M

M. & M. Mfg. Co., The 129
Macwhyte Co. .....
Madison-Kipp Corp. .....
Magnolia Petroleum Co. .....
Maloney Tank Mfg. Co. 118
Manzel Brothers Co. .....
Marion Machine, Fdy. & Supply Co. .....
Marsh Gauge Pole Co. 191
Mason Regulator Co. 110
Master Builders Co. .....
Mathieson Alkali Works, Inc. .....
Maverick, Phillip 193
Merco Nordstrom Valve Co. 73
Merit Oil Equipment Co. .....
Metric Metal Works 175
Midwest Piping & Supply Co. .....
Miller Improved Gas Engine Co. 31
Mission Sales Co. .....
Moon Mfg. Co. .....
Moore, Lee C., & Co., Inc. 79
Moore Drop Forging Co. .....
Munn & Co. 193
Myers, F. E., & Bro., Co. 190

N

National Carbon Co., Inc. 1
National Lead Co. .....
National Petroleum Engineering Co. 192
National Supply Co. 98-99
National Transit Pump & Machine Co. .. 53
National Tube Co. .....
National Turnbuckle Derrick Co. .....
Neilan Schumacher & Co. 187
Newton Process Mfg. Co. 43
Norris Brothers, Inc. .....
Norris, W. C. .....
North American Car Corp. .....
Northern Fire Apparatus Co. .....
Novo Engine Co. 103
Nuttall, R. D., & Co. .....
Nye Tool & Machine Works .....

O

Oakite Products, Inc. .....
O'Brien Steel Construction Co. .....
Ohio Injector Co., The 14
Oil City Iron Works (Corsicana) .....
Oil City Iron Works, Inc. (Shreveport) .. 128
Oil Conservation Engineering Co. .....
Oil Country Specialties Mfg. Co. 25
Oil Insurance Association .....
Oil Well Supply Co. 75
Oklahoma Gas & Electric Co. .....
Oklahoma Portland Cement Co. .....
Oxweld Acetylene Co. 1

P

Page Steel & Wire Co. .....
Paige & Jones Chemical Co., Inc. 13
Parkersburg Machine Co. 100
Parkersburg Rig & Reel Co. 173
Patrick, R. S. 117
Pattin Brothers Co. .....
Pelican Well Tool & Supply Co. 8
Penberthy Injector Co. 182
Petroleum Appliance Co. .....
Petroleum Iron Works Co. 12
Pforzheimer, Carl H., & Co. 117
Phillips Petroleum Co. .....
Pittsburgh-Des Moines Steel Co. .....
Pittsburgh Equitable Meter Co. 120
Pittsburgh Pipe Coil & Bending Co. .....
Pittsburgh Steel Products Co. .....
Powell, William, Co. .....
Power Mfg. Co. 192
Power Piping Co. 184
Power Plant Equipment Co. .....
Prescott Co., The .....
Prest-O-Lite Co., Inc., The 1
Pure Oil Co. 165
Pyle National Co. .....

Q

Quaker City Rubber Co. .....

R

Ratigan, J. P., Co. .....
Reading Iron Co. 9
Reading Steel Casting Co., Inc. .....
Reed & Cole 192
Reed Roller Bit Co. 119
Regan Forge & Engineering Co. ..... Front Cover
Reid, Joseph, Gas Engine Co. .....
Republic Iron & Steel Co. .....
Republic Supply Co. 22
Ridge Tool Co. .....
Riehle Bros. Testing Machine Co. .....
Riter-Conley Co. 192
Robinson Orifice Fitting Co. 184
Rock Island Plow Co. .....
Roots, P. H. & F. M., Co. 138
Ross-Meehan Foundries .....
Ryerson, Joseph T., & Son, Inc. 192

S

Safety Pulling Machine Co. .....
Shaffer, J. E., Co. .....
Shaffer Tool Works 191
Shaw, S. F. 193
Sheffield Steel Corp. 189
Sinclair Refining Co. 153
Sivyer Steel Casting Co. .....
Skelly Oil Co. .....
Skinner, M. B., Co. 190
Smith, A. O., Corp. 17
Smith Separator Co. 58-157
Smooth-On Mfg. Co. .....
Sonner, P. J., Gas Burner Co. .....
South Chester Tube Co. .....
Southern Cornice Works .....
Southwestern Engineering Corp. .....
Spang & Co. 111
Spang, Chalfant & Co., Inc. 82
Spence Machine Co. .....
Standard Rail & Steel Co. .....
Stanley Belting Corp. .....
Star Drilling Machine Co. .....
Stayton, Geo. K. 193
Stearns-Roger Mfg. Co. .....
Steiner, George 193
Strom Steel Ball Co. 172
Sullivan Co., The .....
Sullivan Machinery Co. 182
Sweet, Wm. J., Foundry Co. .....

T

Taubman Supply Corp. .....
Taylor Instrument Companies .....
Templeton, Kenley & Co., Ltd. 193
Texas Company, The 183
Texas Creosoting Co. .....
Texas Pacific Coal & Oil Co. .....
Texas Steel Co. .....
Timken Roller Bearing Co. 60
Tips Engine Works .....
Titusville Forge Co. 170
Titusville Iron Works 115
Toledo Pipe Threading Machine Co. 83
Trimont Mfg. Co. .....
Trumble Gas Trap Co. .....
Tulsa Sheet Metal Co. .....
Turk & Mauldin 193
Twin Disc Clutch Co. .....

U

United Iron Works, Inc. 108
United States Cast Iron Pipe & Fdy. Co. .
United States Industrial Diamond Corp. .. 192
Universal Oil Products Co. 51
U. S. Tool Co. .....

V

Victaulic Co. of America .....
Victor Balata & Textile Belting Co. ....
Vogt, Henry, Machine Co. .....

W

Wagner Electric Corp. .....
Wailes Dove-Hermiston Corp. 180
Wall Rope Works, Inc. .....
Walsh & Weidner Boiler Co. .....
Walworth Co. .....
Warren Petroleum Co. .....
Washburne, Chester W. 193
Waukesha Motor Co. .....
Westcott & Greis. .....
Westinghouse Electric & Mfg. Co. .....
Wheelton & Townsend, Inc. .....
Wheeling Steel Corp. .....
Wickwire Spencer Steel Co. .....
Wico Electric Co. 11
Widdell Engineering Co. .....
Williams, J. H., & Co. .....
Williamsport Wire Rope Co. .....
Williams Tool Corp. .....
Wilson Oil Tools Corp. 7
Wilson-Snyder Mfg. Co. .....
Witte Engine Works .....
W-K-M Company, Inc. .....
Worthington Pump & Machinery Corp. .. 62
Wright Mfg. Co. .....

Y

Yale & Towne Mfg. Co. .....
Young Engine Corp. .....

Z

Zero Hour Torpedo Co. .....
Zwetsch, Heinzelmann & Co. .....

The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

VOL. 26. NO. 14 TULSA, OKLAHOMA, AUGUST 25, 1927

Copyright, 1927, by The Petroleum Publishing Co.

TABLE OF CONTENTS

SPECIAL ARTICLES

Crude Oil Situation Shows Improvement 35
By Andrew M. Rowley
Substantial decline in Seminole area helps conditions in Mid-Continent. West Texas continues upward trend.

Seminole Wildcats Not Very Promising 37
By J. L. Dwyer
Of the 36 drilling wells listed as potential discoverers of new pools, 11 are dry and others running low.

Transportation in Oil Industry (With Map) 38-39
By C. O. Willson
Unequal distribution of crude oil production, refining and gasoline consumption.

Oklahoma-Texas Leading Producers 40
By James McIntyre
Carter in Oklahoma and Gulf in Texas led all. Price slump emphasized.

Congress to Attempt Regulating Oil 41
By N. O. Fanning
Schemes for restrictive legislation may go beyond unit operation.

Pecos County Operators to Act on Proration 41

Louisiana Gas to Serve Five States 42
By Neil Williams
Active competition for gas rights in North Louisiana. Many lines planned.

More Capital Needed by Industry 42
By N. O. Fanning
Borrowings last year amounted to half billion dollars.

Gasoline Transportation Costs (Editorial) 44

FIELD OPERATIONS

North and West Texas 46-168
By C. D. Lockwood

Late Fields 47

Texas Panhandle 48-168
By James H. Dameron

Oklahoma 50
By J. L. Dwyer

North Louisiana-Arkansas 52
By Neil Williams

Southwest Texas 54
By B. D. Stevenson

Gulf Coast 57
By P. L. McGreal

Kansas 57
By J. L. Dwyer

Rocky Mountain Area 59
By Tolbert R. Ingram

Canada 59
By Victor Lauriston

California 61
By L. P. Stockman

Central West 63
By Whit

Michigan 63
By Whit

Pennsylvania-West Virginia 64
By D. S. Wakenight

Kentucky-Tennessee 64
By Whit

REFINING AND MARKETING

Survey of Foreign Refineries 88

Chicago Gasoline Demand Still Light 144
By J. B. Waldo

Distress Gasoline in East 145
By N. O. Fanning

Changes in Patent Office Procedure 146
By H. L. Kauffman
Recent revisions will expedite service and decrease inequities.

Refinery and Marketing News 148

Refinery and Crude Prices 150-151

Tank Wagon Quotations 152

Plant Operators' Page 155

Technical Questions Answered 162
By Dr. C. K. Francis

Of Interest to Sales Departments 164

Short Talks on Specifications 164
By William T. Ziegenhain

Computing Gas Volume by Slide Scale 166
By E. J. Jones
New device for use with orifice meter charts found accurate.

ARTICLES OF GENERAL INTEREST

The Advertisers' Index 33

Natural Gas Developments 68

Men Known in Oildom and Personals 74

Equipment and Supplies 78

Development of Gas Measurement 80
By John C. Diehl

Texas Gross Production, Second Quarter 91

Oklahoma Reports, Second Quarter 109

Roxana Places Pipe Order 109
By B. E. V. Luty

Crude Stocks in West Texas 127

Classified Want Advertisements 142-143

Recording Magnetometer Another Step 172

Crude Petroleum Statistics 194

BE A REGULAR READER

The OIL and GAS JOURNAL Tulsa, Okla.

You are hereby directed to mail The Oil and Gas Journal to me for.....year. Enclosed find remittance $.....

Classify my interests as checked by me.

.....Producing ..... Refining
..... Equipment Marketing

Name .....
Address .....
City .....

$6 a Year
$3 6 Months

Refinery Section Starts on Page 144

Crude Situation Shows Improvement

Highest daily average estimated production in 1926, week ended Dec. 25, 2,385,139 bbls. Lowest in 1926, January 30, 1,915,960 bbls.

Substantial Decline in Seminole Area Helps Conditions in Mid-Continent. West Texas Continues Upward Trend

By Andrew M. Rowley

Highest daily average estimated light oil production in 1926, week ended Dec. 25, 1,797,349 bbls. Lowest in 1926, Jan. 30, 1,371,600 bbls.

Improvement is being shown in the crude petroleum situation in the Mid-Continent, with the Greater Seminole area continuing to decline in production and wildcat tests there, which had been figured as possible discovery wells in new pools, failing as yet to show anything very promising. As a result of the slump at Seminole, the average daily production of Oklahoma registered a decrease of 41,000 barrels last week, with indications another decline will be recorded this week. Interest is centering in the tests drilling in the Little River Pool, south of Seminole. This area has been regarded as possibly the greatest menace to the general situation, the discovery well there having held up at more than 12,000 barrels daily for over a month. Intrusion of water, however, has resulted in some change of opinion as to the possibilities of the area. It is expected some wells will be completed within the next two weeks in the area which will help operators to form some definite idea as to what may be expected there.

The crude price reductions announced for West Texas and most of the Texas Panhandle indicate there is not any great demand for production from those areas. The output of West Texas has been increasing rapidly and it is probable the pipe line companies will prorate runs from the fields in that section within the near future. This will means operators either will have to slow up on their operations or erect storage to care for their production. Taken in connection with the lower prices announced for the crude, operations in the area may be curtailed to some extent in the near future.

The West Texas section is the only one showing material gains in production and, if efforts to curtail the output there are successful to any extent, the effect will be felt at once on the general situation. Such efforts will aid greatly in bringing production down to a level nearer consumption.

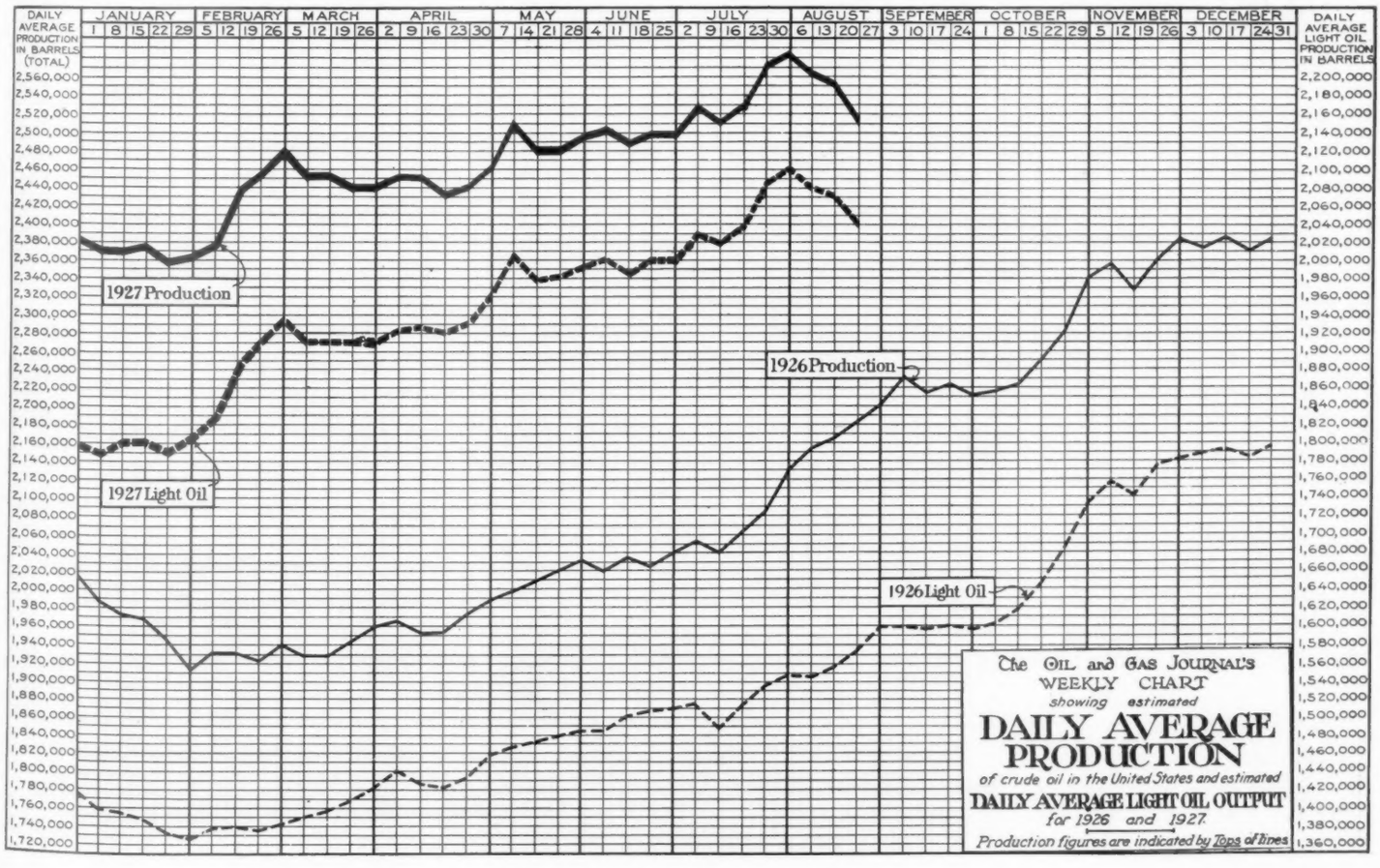
The reduction in price of Pennsylvania grade oil in Buckeye Pipe Line, in southeastern Ohio, is regarded as a local situation without significance in relation to conditions generally.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended August 20, and a comparison with the previous week follows:

	Aug. 20		Aug. 13	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	19 615	.....	19.330	.....
Burbank	38.440	.....	38.335	.....
Other Osage Fields	31.215	.....	31.260	.....
Cushing and Shamrock	21,415	.....	21,440	.....
Bristow and Eastern Bristow	25,470	.....	25,465	.....
Cromwell	12,310	.....	12,305	.....
Garber	11,005	.....	11,415	.....
Blackwell-Braman	9,605	.....	9,620	.....
Seminole	451.895	.....	489.685	.....
Wewoka	17.235	.....	18,935	.....
Northern Miscellaneous	112.895	.....	113.320	.....
Southern Fields	66,425	.....	67,210	.....
Total Oklahoma	817.525	.....	858,320	.....
North Louisiana	46,930	9,600	51,055	9.550
Arkansas	23 335	81,205	23.505	8.5.050
North Central Texas	158.315	.....	155.910	.....
West Texas	163 487	.....	151.180	.....
Texas Panhandle	98,695	.....	101.810	.....
East Central Texas	31.770	.....	32.300	.....
Kansas	104.410	.....	105.450	.....
Total Mid-Continent Area	1,444,467	90.805	1,479,530	92.600
Gulf Coast	.....	136.233	.....	140,144
Southwest Texas	.....	32,560	.....	32,380
Eastern	113,000	.....	112.500	.....
Rocky Mountain Area	79,909	.....	84,700	.....
California—				
Santa Fe Springs	40,500	.....	40.500	.....
Long Beach	91,500	.....	91,500	.....
Torrance	4,000	17,500	4,000	17,500
Huntington Beach	67,500	.....	67,000	.....
Dominguez	15,000	.....	15,000	.....
Rosecrans	8 500	.....	8.500	.....
Inglewood	20,000	13,000	20,000	12,500
Ventura Avenue	48,000	.....	42,000	.....
Seal Beach	56,000	.....	56,500	.....
Remainder of State	55,000	186,500	55,000	186,500
Total California	406,000	217,000	400,000	216,500
Total United States	2,043,376	476,598	2,076,730	481,624
Grand Total	2,519,974		2,558,354	

Total Decrease, 38,380 Bbls.; Light Oil Decrease, 33,354 Bbls.



Halt Decline in Gasoline Prices

Oklahoma Market Apparently on Bottom After Slump of Three Weeks Duration. Little Change in Other Products

By William T. Ziegenhain

Although gasoline prices eased off slightly in Group 3 during the week, there was sufficient confidence deve'oped in the crude situation and the general market to at least halt the rapid downward movement and it is probable they are now on the bottom. There were no price changes in any other oils although kerosene was not traded as freely as last week and fuel oil prices were threatened several times during the week as sales were reported in other territories below the Group 3 differential. Lubricating oils continued to move steadily and wax quotations were made with a little more confidence in the possibility of future prices being higher.

Over the week there was practically no change in the natural gasoline prices and the market was supported by outside buying at times whenever there was a tendency for the market to weaken. There was a consistent demand for A and AA grades and as the market absorbed the greater share of the offerings on these grades attention was given to the B and BB grades. Buying was just sufficient to comfortably maintain last week's prices on Grade C.

The Seminole Field has held the key to the Group 3 market situation for the past four months and as its production increased week after week many refiners were faced with the possibility of a crude cut and of taking a great loss on inventories should the field's production continue to increase. Gasoline stocks had been maintained at a relatively high figure during the early part of the summer, but low prices and the delayed tourist business promised to increase the consumption sufficiently to take care of any amount that might have been considered a surplus. This hope was strengthened with brisk buying over short periods but in the more recent weeks refiners were less confident of realizing their program of bringing stocks down to the anticipated margin on which to start next year.

With some refiners increasing their crude runs because of local favorable conditions, the general situation was further aggravated. These factors were responsible for the free offerings made last week and allowed considerable gasoline and fuel oils to be moved at prices below the prices generally quoted. For a few days early in the week there was talk of a coming 6-cent U. S. motor market and 70-cent fuel oil. This never developed and was averted principally by the removal of the probability of a crude cut along with the fair continued movement of refined oils.

Refiners could not have accepted 6 cents for their gasoline with fuel oil and other products at their present prices without receiving a crude cut, from an operating standpoint. The gasoline price went to 6⅛ cents during the latter part of April and the first week in May but fuel oil was then selling at 90 cents a barrel and other oils were generally a fraction higher than their present prices. With all refinery products being sold at or near their lowest price for the year, and with a lesser chance for a crude cut in the Mid-Continent there is reason to believe that gasoline prices are now on the bottom.

REFINED MARKET BAROMETER

A weak gasoline market at all refining centers with only a fair movement in all oils marked the end of a week of highly competitive trading. The offering in large quantities of gasoline and fuel oil during the early part of the week indicated a feeling on the part of Mid-Continent refiners that a crude cut was probable. This situation was relieved during the latter part of the week by the continued decline in the Seminole crude oil production, but a great volume of material continued to be offered as refiners in all sections chose to decrease inventories consistent with the approaching close of the season of high consumption. Natural gasolines were threatened with declines east of Ca'ifornia, but export orders arrived in time to hold the market at a constant level. Large volumes of California, Gulf Coast and Mid-Continent gasoline were moved into the East and were slowly absorbed. The failure to move any great volume of kerosene for export, as was thought probable early in the week, made that product heavy in all refining centers. With almost all prices in a'l refining centers at or near their low mark for the year, the general market structure appears to be resting on bottom.

Mid-Continent—Refinery gasolines generally lower all areas, natural gasoline remaining the same. Kerosene, gas oil and fuel prices unchanged, but products generally weak. Lubricant prices same with movement fair. Wax is slowly ga.ning strength.

Atlantic Seaboard—Gasoline prices remain unchanged, but position is weakened as Mid-Continent, California and Gulf Coast refiners offer large volumes to effect relief in their normal marketing territories. Kerosene, distillates and lubricant prices remain the same, with trading slower. Fuel oil, gas oil and wax prices are firm.

California—No price changes. Fuel oil trading improved. Heavy domestic movement holding gasoline steady.

Pennsylvania—Naphtha prices were reduced with prices on other products remaining the same. Lubricants and wax continued to move freely, but refiners were not inclined to increase price. Fuel oil had a fair movement.

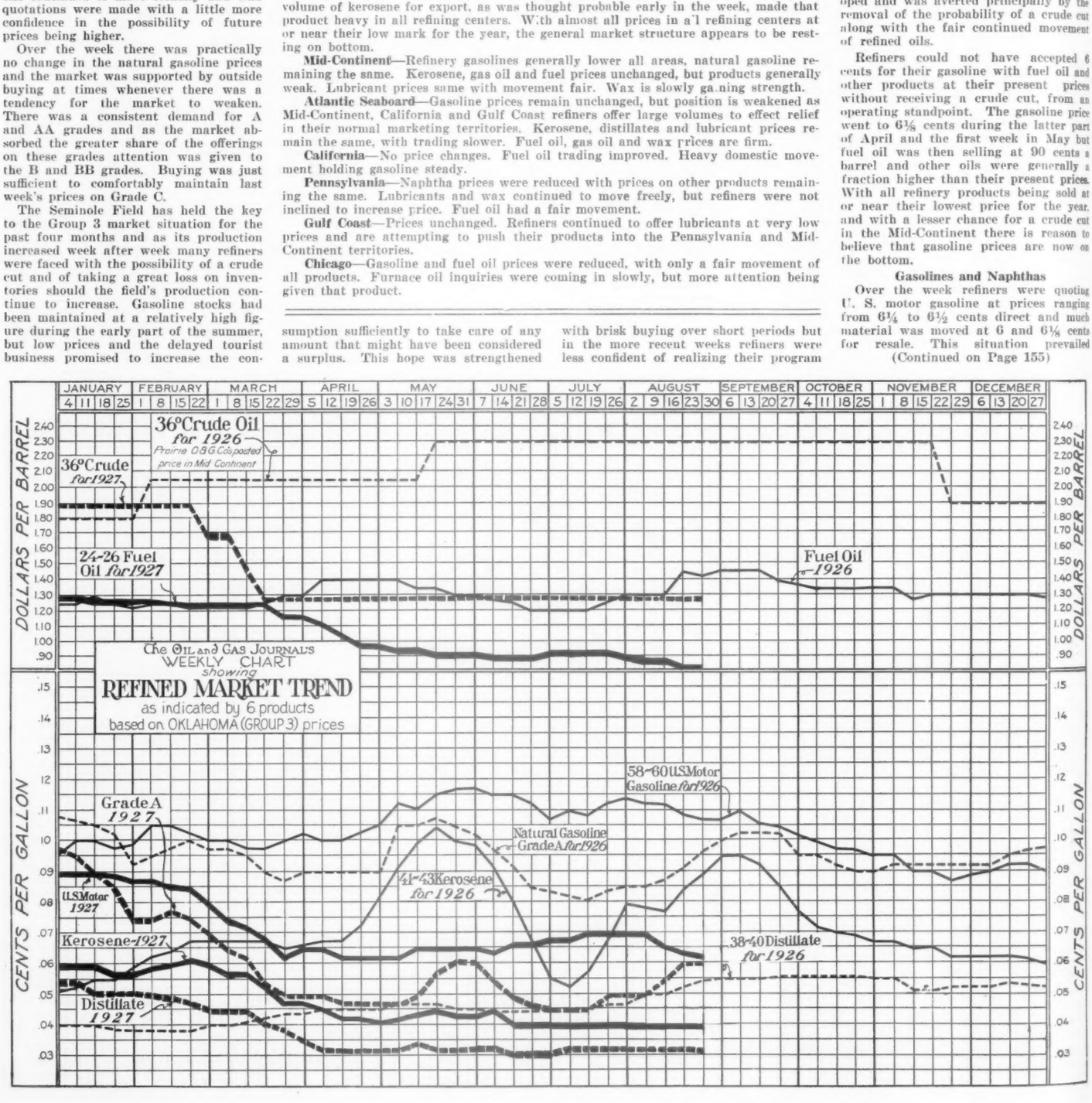
Gulf Coast—Prices unchanged. Refiners continued to offer lubricants at very low prices and are attempting to push their products into the Pennsylvania and Mid-Continent territories.

Chicago—Gasoline and fuel oil prices were reduced, with only a fair movement of all products. Furnace oil inquiries were coming in slowly, but more attention being given that product.

Gasolines and Naphthas

Over the week refiners were quoting U. S. motor gasoline at prices ranging from 6¼ to 6½ cents direct and much material was moved at 6 and 6⅛ cents for resale. This situation prevailed

(Continued on Page 155)


JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER
DOLLARS PER BARREL
CENTS PER GALLON
36°Crude Oil for 1926
Prairie O.&G.Co.posted price in Mid Continent
36°Crude for 1927
24-26 Fuel Oil for 1927
Fuel Oil 1926
The OIL and GAS JOURNAL'S WEEKLY CHART showing
REFINED MARKET TREND
as indicated by 6 products based on OKLAHOMA (GROUP 3) prices
Grade A 1927
U.S.Motor 1927
Kerosene-1927
Distillate 1927
58-60 U.S.Motor Gasoline for 1926
Natural Gasoline Grade A for 1926
41-43 Kerosene for 1926
38-40 Distillate for 1926

Seminole Wildcats Not Very Promising

Of the 36 Drilling Wells Listed as Potential Discoverers of New Pools, 11 Are Dry and Others Are Running Low

By J. L. Dwyer

When the Seminole operators were meeting to consider the overproduction situation, Ray M. Collins, who had been named umpire of the field, listed 36 drilling wells which were thought likely to present a menace to the crude market by finding a productive sand.

The wells were located in eastern central Oklahoma, adjacent to the Greater Seminole area, which had been one of the contributing causes to the overproduction trouble, and their location was thought to be of sufficient importance to make any effort to curtail their output a highly desirable step.

In times of fields like Seminole, there often exists a grave apprehension that wells drilling in the same area may find another big pool, and in the case of Seminole, this fear was well-founded, for there were numerous extensions.

The problem of the 36 wildcat wells is partly solved by the finding of 11 Wilcox sand dry holes, 2 small oil wells, and 2 gas wells, while an inspection of the drilling records of those wells which have become deep enough to offer good correlations influences the opinion that a large percentage of them are running low structurally.

This does not mean that the general area represented by the drilling wells is condemned, for it lies in a region from which much is expected in future developments of the oil fields of Oklahoma, but the finding of large fields requires a considerable amount of drilling.

Status of 36 Wells

A list of the 36 wells and their owner, location and status is given below:

R. F. Garland, Section 10-4-5, 1,800 feet.

L. A. Gillespie, Section 12-5-4, 2,100 feet.

Wiser Oil Co., Section 25-6-1, 4,309 feet.

Carter Oil Co., Section 18-6 8, 3,030 feet.

Indian Territory, Section 9-7-6, dry and abandoned, 4,537 feet.

Independent Oil & Gas, Section 30-7-6, dry and abandoned, 4,570 feet.

Indian Territory, Section 32-7-7, fishing, 3,305 feet.

L. H. Wentz, Section 21-8-7, cleaning out, 3,575 feet.

Magnolia Petroleum, Section 31-8-7, completed, gas well.

Independent, Section 14-8-9, completed, 160 bbls.

Independent, Section 14-8-9, dry and abandoned, 3,900 feet.

Independent, Section 32-9-5, 4,093 feet.

Barnsdall, Section 7-9-7, completed, gas well.

Barnsdall, Section 29-9-7, dry and abandoned, 4,451 feet.

Sykes and others, Section 12-10-3, 3,800 feet.

F. Davis and others, Section 16-10-5, 3,700 feet.

Tidal Oil Co., Section 26-10-5, 4,460 feet.

Prairie Oil & Gas, Section 30-10-6, dry and abandoned, 4,582 feet.

Prairie Oil & Gas, Section 22-10-6, 20-bbl. well, completed.

Continental Oil, Section 28-10-7, 4,100 feet.

H. F. Wilcox Co., Section 32-11-2, fishing, 3,859 feet.

Ramsey Brothers, Section 9-4-5, dry and abandoned, 2,880 feet.

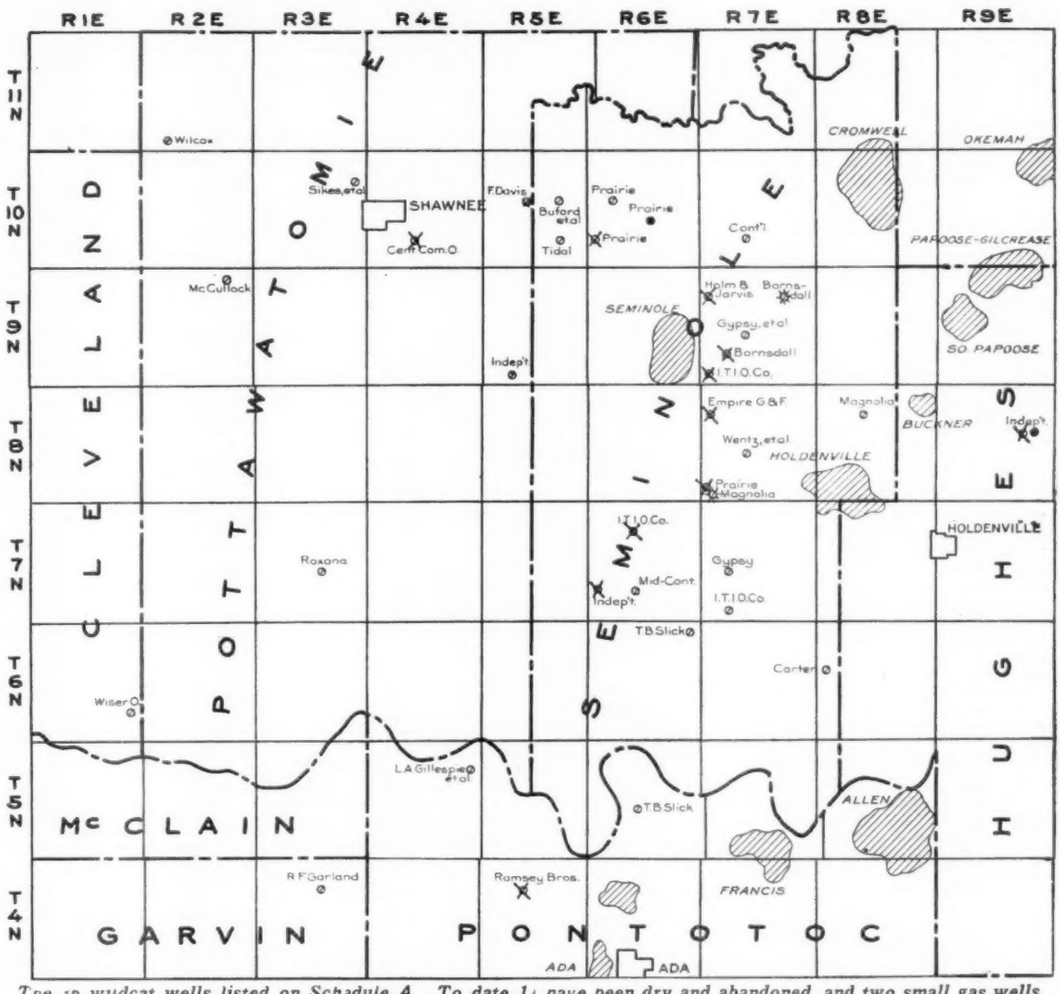
Prairie Oil & Gas, Section 31-8-7, dry and abandoned, 4,360 feet.

T. B. Slick, Section 21-5-6, oil and water at 2,693 feet, not completed.

T. B. Slick, Section 1-6-6, fishing, 3,966 feet.

Roxana Petroleum Corp., Section 22-7-3, 4,745 feet.

Mid-Continent Petroleum, Section 28-7-6, 1,500 feet.



The 36 wildcat wells listed on Schedule A. To date 11 have been dry and abandoned, and two small gas wells and two small oil wells comprise the remainder of the completions.

Gypsy Oil Co., Section 20-7-7, 4,300 feet.

Empire Gas & Fuel Co., Section 7-8-7, dry and abandoned, 4,339 feet.

Magnolia Petroleum Co., Section 9-8-8, fishing, 4,178 feet.

McCulloch Oil Co., Section 2-9-2, 3,310 feet.

Holm & Jarvis, Section 11-9-7, dry and abandoned, 4,505 feet.

Gypsy Oil Co., Section 21-9-7, 70-bbl. show, not completed.

Indian Territory, Section 31-9-7, dry and abandoned, 4,465 feet.

Central Commercial Oil Co., Section 28-10-4, abandoned, 3,157 feet.

McCulloch Oil Co., Section 14-10-5, dry and abandoned, 4,901 feet.

Summary—Wells, 36; completed, 15; oil, 2; gas, 2; dry, 11; drilling, 21.

Interesting Territory

The country to the south of the Greater Seminole area is one of the most interesting territories in the Mid-Continent Field and one which has afforded much study to the geologist. The Arbuckle Mountains gently dip to the level of the foothills just south of the city of Ada, which is seen on the accompanying map. There has long been an effort to find the lowest part of the Wilcox sand in the space between the present limits of the Seminole Field and the dip of the Arbuckle Mountains, and it is thought that the present drilling operations in this territory will definitely determine the position of the Wilcox. The majority of geologists hold to the belief that this sand will not be found productive on the uplift, and for this reason the topic is of great interest.

The northern and western part of the Oklahoma fields, shown on the accompanying map, have long been the scene of an extensive wildcat play. The north part of Pottawatomie County has been under lease for several years, and while no oil has been found in this section as yet, there is much encouragement held out for the region.

PRESIDENT TEAGLE EXPLAINS AGREEMENT ON GERMAN PROCESS

"Standard Oil Co. of New Jersey's agreement with I. G. Farbenindustrie pertains exclusively to patents which Farben is applying to coal and which Standard experimentally proposes to apply to oil," W. C. Teagle, president of the New Jersey company, told a Dow, Jones' representative in London.

Standard of New Jersey is not concerned over the development of coal liquification in America. "Our arrangement with Farben is not to finance any process. It is merely a mutual aid in research along the lines indicated. The report is untrue that the agreement relates to tetraethyl or will be exploited in a plant operated jointly with the du Pont interests," Mr. Teagle said.

Asked whether any foreign oil company to become selfcontained through liquefying coal, he stated:

"Standard of New Jersey's oil sales through the Deutsche Amerikansche were expanding our German plant at sufficient speed to cope with the demand and are continuing to increase." Regarding claims by Romana Americana, another New Jersey unit, for damages to its properties during the war, he said:

"Our claims are not in any way invalidated by the unfavorable British Court decision in claims of another company."

Mr. Teagle said that formation of a separate Delaware shipping company to take over Standard of New Jersey's tankers was aimed at the securing of local business advantages, rather than representing a change in the company's relations with its subsidiaries.

Transportation in the Oil Industry

Unequal Distribution of Crude Oil Production, Refining and Gasoline Consumption Bringing Important Changes

By C. O. Willson

Recent developments in the oil business have tended to stress the importance of transportation in the movement of crude oil and its refined products. The bringing in of the Seminole Field in a state which already had twice as much crude oil as it had refining capacity and far more refining capacity than was needed for the gasoline consuming requirements within the state has taxed the pipe line and storage facilities of the major oil organizations.

In the refining division despite the surplus of crude oil in some sections which has been responsible for the collapse in price schedules, there have been refinery owners who needed more crude than they were able to secure to maintain plant operations.

Finally in the marketing end there has existed a competitive situation in which charges of "price cutting" are constantly heard. In their zeal to sell surplus gasoline and other products in an already glutted market, refiners have not been hesitant in going outside their normal marketing areas with the inevitable low prices.

In this more or less general "mixup" which always becomes acute during an over-production period, it has been apparent that the organization which is most advantageously located in regard to the transportation of its crude oil or refined products or both, has had an important advantage over its competitors. The expansion programs covering transportation, refinery and marketing operations now completed or under way indicate that more and more of the major organizations have sensed this situation and are adjusting their operations accordingly.

Importance of Transportation

In this connection an executive of one of the large refining and marketing organizations has said that competition in the oil business is now largely based on comparative transportation costs. In his opinion important advantages of one company over another in regard to plant operating and marketing costs no longer exists. In contrast to the situation of a few years ago he contends that the owner of a small refinery can produce gasoline as cheaply as the major plants. The fact that cracking processes and other equipment which adds to plant efficiency are now generally available, are the factors which are responsible for this situation. Similarly he believes that the per gallon cost of gasoline distribution does not vary greatly in any given area.

Probably very few oil men engaged in the refining and marketing branches will subscribe in toto to the observations of this executive. However, practically all will agree that the standardization of equipment and operating methods extending from the production of crude oil to the operation of a filling station has tended to equalize operating costs when the whole industry is considered. This trend toward equalization in costs, however, has not extended to the various methods of transportation and it is this fact that has caused many companies to readjust their entire scheme of operations with still more important changes scheduled for the future.

What Map Shows

The accompanying map of the United States and tables were prepared to show at a glance the present distribution of crude oil production, refinery operation (based on crude oil runs to stills) and gasoline consumption around which the transportation problems of the oil industry center. The data are based on estimated daily operations and consumption at this time.

The data on crude oil production (column A) were taken from The Oil and Gas Journal's estimate of daily production for the week ending August 6. There has been no material change in production since that date.

The figures on refinery operations (column B) give the estimated daily crude runs to stills of refineries by states during August. These figures were derived from reports of The Oil and Gas Journal and the Bureau of Mines. The Government's monthly reports do not give operations by states but by large areas. However, from the known operations of several states which are checked regularly by The Oil and Gas Journal it was possible to estimate the operations by states at the present time for the entire United States.

In comparing the figures on total crude oil production (column A) and crude runs to stills (column B) it will be noted that the former exceeds the latter by 300,000 bbls. daily. The total crude runs to stills include about 140,000 bbls. of foreign crude refined at plants located along the Gulf Coast and the East Coast. This means that the domestic crude production exceeds the refinery requirements for domestic crude by about 440 000 bbls. daily. It is estimated that between 250,000 and 300,000 bbls. of this crude oil is going to storage and the remainder is being consumed as fuel oil without being processed at refineries. A small quantity is exported.

Gasoline Consumption

The estimates on gasoline consumption (column D) were derived from gasoline tax reports. The latest available report covered June of this year. By comparing June and August consumption of previous years it was possible to estimate the August consumption this year. In a few states where gasoline tax reports were not available the consumption figure was derived from automobile registration figures. In correlating the data on refinery operations and gasoline consumption it was necessary to take into consideration the evaporation losses between the refinery and retail station deliveries to consumers. This loss is compensated for in most states by allowing the distributor who pays the tax from 2 to 4 per cent as the difference between his purchases from the refinery and the deliveries to consumers on which he does not pay any tax.

Crude Requirements

The estimated daily crude requirements for each state and marketing area (column C) were based on gasoline consumption, taking into consideration the differences in gasoline recovery from crude. As is clearly shown in the monthly reports of the Bureau of Mines the gasoline recovery from crude varies widely in different areas. For instance at the present time the gasoline recovery in California averages about 28 per cent, in the Rocky Mountain area, 60 per cent, Middle West 55 to 57 per cent, Mid-Continent 50 to 55 per cent and the East Coast 35 per cent. So far as possible in estimating the crude oil refinery requirements of a particular state, it was based on the average recovery of the refineries now operating in the area in which it is located.

This difference in gasoline recovery which also takes into consideration the natural gasoline used at refineries for blending, is due to the differences in the crude oil and also manufacturing processes. In California the average gravity of the crude is low. California refineries as a unit have few cracking units in operation. This combination of low gravity crude with limited cracking facilities accounts for the large amount of crude necessary to furnish the gasoline requirements of the West Coast. In the Middle West, Mid-Continent and Rocky Mountain areas, refiners as a unit

(Continued on Page 156)

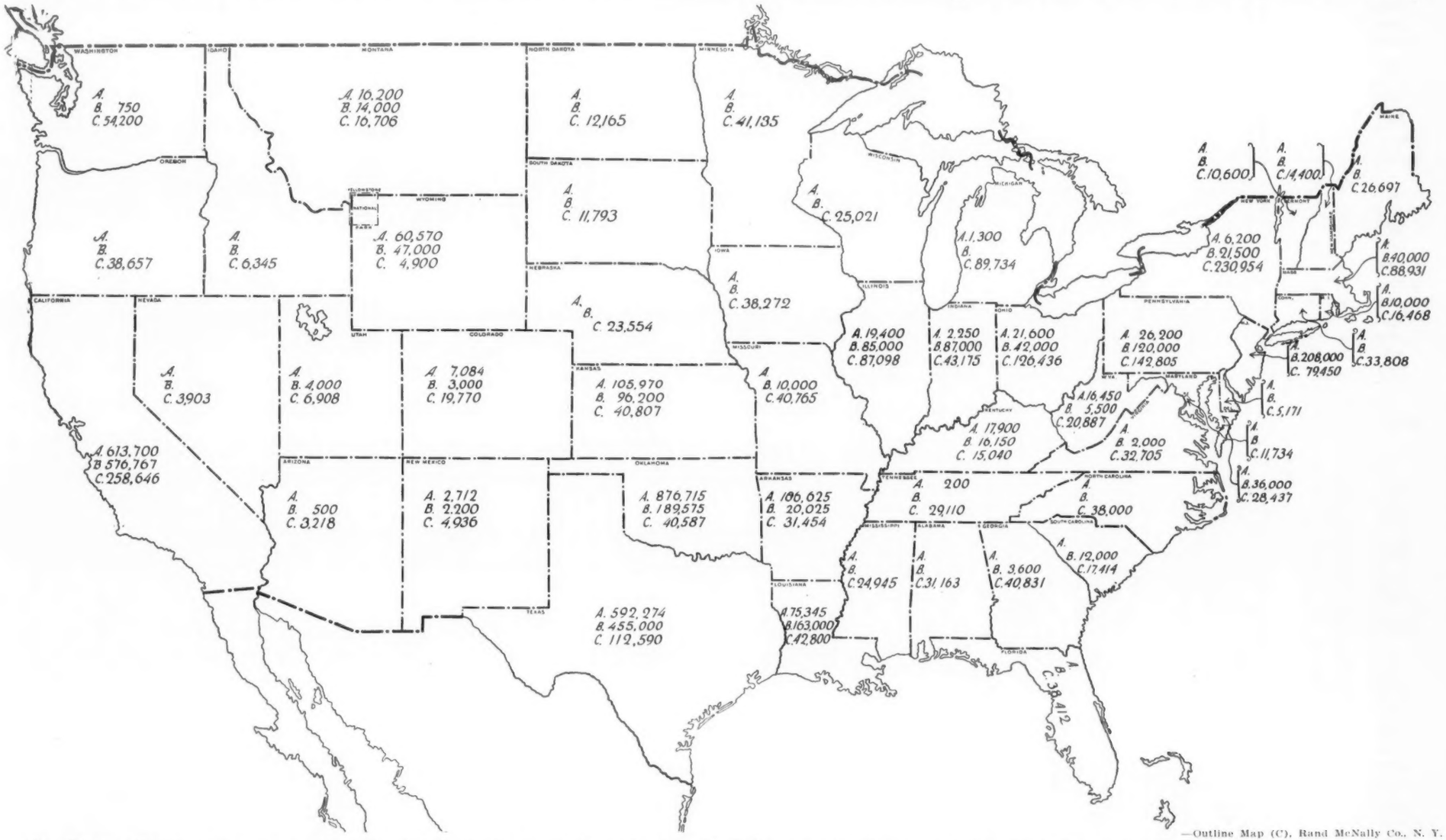
Table 1—Showing relationship by marketing areas between crude oil production, crude oil runs to stills of refineries, crude oil requirements for gasoline consumption and gasoline consumption. Companies named are the principal marketing organizations in the territories named.

	Daily Crude Oil Production A		Daily Crude Oil Runs to Stills Refineries B		Daily Crude Oil Requirements C		Daily Gasoline Consumption D	
	bbls.	pct.	bbls.	pct.	bbls.	pct.	bbls.	pct.
Middle Western States (Standard Oil Co. of Indiana) Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, North Dakota, Missouri, South Dakota, Wisconsin	128,920	5.0	278,200	12.3	429,965	19.5	274,081	29.5
Ohio (Standard Oil Co. of Ohio) Ohio	21,600	.8	42,000	1.8	126,436	5.7	63,218	6.8
Nebraska (Standard Oil Co. of Nebraska) Nebraska	.....	....	.....	....	23,554	1.0	13,426	1.4
Southern District (Standard Oil Co. of Kentucky) Alabama, Kentucky, Georgia, Mississippi, Florida	17,900	.7	19,750	.8	150,419	6.8	57,868	6.2
Southwestern District (Magnolia Petroleum Co.) Oklahoma, Texas	1,468,989	57.2	644,575	28.4	153,177	7.0	69,205	7.4
New York-New England (Standard Oil Co. of New York) New York, New Hampshire, Maine, Vermont. Also part of Connecticut, Massachusetts, Rhode Island	6,200	.2	46,500	2.1	352,279	15.9	122,848	13.2
Pacific Coast (California, Nevada, Oregon, Washington, Arizona	613,700	23.9	577,950	25.5	358,624	16.2	100,404	10.8
Pennsylvania-Delaware (Atlantic Refining Co.) Pennsylvania, Delaware. Also part of Connecticut, Massachusetts and Rhode Island	26,200	1.0	145,000	6.3	217,583	9.8	82,822	8.9
Central Southern States (Standard Oil Co. of Louisiana) Arkansas, Louisiana, Tennessee	182,170	7.1	183,025	8.0	103,364	4.7	31,391	3.4
Rocky Mountain States (Continental Oil Co.) Colorado, Wyoming, Montana, Utah, Idaho, New Mexico	86,566	3.2	70,200	3.1	59,565	2.7	31,073	3.3
Atlantic Coast (Standard Oil Co. of New Jersey) District of Columbia, Virginia, Maryland, New Jersey, North Carolina, South Carolina, West Virginia	16,450	.6	263,500	11.2	228,627	10.4	81,065	8.7
Total	2,568,695	99.7	2,270,700	99.5	2,203,554	99.7	927,455	99.6

Table 2—Showing relationship by states between crude oil production, crude oil runs to stills of refineries, crude oil requirements for gasoline consumption, gasoline consumption and percentage of gasoline obtained from crude oil. Data given in barrels daily.

States—	Daily Crude Oil Production A	Daily Crude Runs to Stills of Refineries B	Daily Crude Oil Requirements to Furnish Gasoline C	Daily Gasoline Consumption D	Percentage of Gasoline from Crude
Alabama	.....	.....	31,163	10,907	35
Arizona	.....	500	3,218	890	35
Arkansas	106,625	20,025	31,454	6,960	22
California	613,700	576,767	258,646	72,421	28
Colorado	7,084	3,000	19,770	11,862	60
Connecticut	.....	.....	33,808	11,833	35
Delaware	.....	.....	5,171	1,791	35
District of Columbia	.....	.....	11,734	4,107	35
Florida	.....	.....	38,412	15,365	40
Georgia	.....	3,600	40,831	14,291	35
Idaho	.....	.....	6,345	3,807	60
Illinois	19,400	85,000	87,098	49,646	57
Indiana	2,250	87,000	43,175	24,610	57
Iowa	.....	.....	38,272	21,815	57
Kansas	105,970	96,200	40,807	22,036	54
Kentucky	17,900	16,150	15,040	8,573	57
Louisiana	75,345	163,000	42,800	12,840	30
Maine	.....	.....	26,697	9,344	35
Maryland	.....	36,000	28,437	9,953	35
Massachusetts	.....	40,000	88,931	30,222	35
Michigan	1,300	.....	89,734	51,104	57
Minnesota	.....	.....	41,135	22,764	57
Mississippi	.....	.....	24,945	8,732	35
Missouri	.....	10,6000	40,765	23,236	57
Montana	16,200	14,000	16,706	5,847	35
Nebraska	.....	.....	23,554	13,426	57
Nevada	.....	.....	3,903	1,093	28
New Jersey	.....	208,000	79,450	27,808	35
New Hampshire	.....	.....	14,400	5,040	35
New Mexico	2,712	2,200	4,936	2,468	50
New York	6,200	21,500	230,954	80,838	35
North Carolina	.....	.....	38,000	13,300	35
North Dakota	.....	.....	12,155	6,926	57
Ohio	21,600	42,000	126,436	63,218	50
Oklahoma	876,715	189,575	40,587	21,917	54
Oregon	.....	.....	38,657	10,824	28
Pennsylvania	26,200	120,000	142,805	57,122	40
Rhode Island	.....	10,000	16,468	5,764	35
South Carolina	.....	12,000	17,414	6,095	35
South Dakota	.....	.....	11,793	6,722	57
Tennessee	200	.....	29,110	11,644	40
Texas	592,274	458,000	112,590	47,288	42
Utah	.....	4,000	6,908	4,145	60
Vermont	.....	.....	10,620	3,717	35
Virginia	.....	2,000	32,705	11,447	35
Washington	.....	750	54,200	15,176	28
Wes. Virginia	16,450	5,500	20,887	8,355	40
Wisconsin	.....	.....	25,021	45,212	57
Wyoming	60,570	47,000	4,900	2,944	60
Total	2,568,685	2,270,700	2,203,554	927,455	..

Distribution of Production and Consumption in Oil Industry



—Outline Map (C), Rand McNally Co., N. Y.

The Oil and Gas Journal map showing estimated A—Daily crude oil production; B—Refinery crude oil runs to stills; C—Daily crude oil requirements for gasoline consumption. (All figures in barrels.)

Oklahoma-Texas, Leading Producers

Carter in Oklahoma and Gulf in Texas Led All. Slump in Crude Prices Emphasized by the Report

By James McIntyre

While the same names appear among the leading producers in Oklahoma that were found there a year ago, the list of leading operators in Texas contains new names with each succeeding quarterly gross production report. The development of Central and West Texas territory has brought into prominence a number of oil men and oil companies that were inconspicuous as producers or entirely missing from Texas production lists in other years.

The accompanying tables show the production, net in the case of Oklahoma and gross in the case of Texas, of the leading oil producers in the two states in the first half of the present year.

Analyzing the second quarterly crude oil production report for Oklahoma uncovers the usual number of interesting and perhaps valuable sidelights. This report to the State Auditor for the purposes of the Oklahoma gross production tax, is expected to be made by every owner of oil production and every owner of royalty. Over 14,000 separate reports are made to the State Auditor, but the report as published includes only the more important producers and royalty owners, omitting probably 12,000 names. Of the 14,000 companies, firms and persons interested directly in oil production a mere handful produced the bulk of the 129,565,618 bbls. brought to the surface in the first six months of the year. The Carter Oil Co. alone is credited with over 9 per cent of the gross production, and that company's own net production is about 8.3 per cent of the total gross output of the State.

GROSS PRODUCTION OF LEADING OIL COMPANIES IN TEXAS FIRST HALF OF 1927

	Second quarter (bbls.)	First quarter (bbls.)	Total six months (bbls.)
Gulf Production Co.	6,195,776	5,333.582	11,529,358
Yount Lee Oil Co.	3.411,162	4,169,962	7 581,124
Phi lips Petroleum Co.	2,962,760	3,189,861	6,152.621
The Texas Company	3,048,653	3.022,818	6,071,471
Magnolia Petroleum Co.	2,926,145	2,960 421	5,886,566
Humble Oil & Refining Co.	3,017,440	2,596.457	5.613.897
Big Lake Oil Co.	1,702,783	2,018,382	3,721,165
Prairie Oil & Gas Co.	1,510,666	1,629.326	2.139.9 2
Marland Oil Co.	1,386,779	1,608,526	2,995.305
Rio Bravo Oil Co.	833.039	1,579.034	2,412.073
Pure Oil Co.	925,217	984,464	1,909,681
Continental Oil Co.	873.648	925,276	1,798,924
Roxana Petroleum Corp.	765,374	698.873	1,464.247
Group 1 Oil Co.	649,222	727,405	1,376,627
McMan Oil & Gas Co.	470,549	578.537	1,049.086
Republic Production Co.	578,341	617,375	1,195.716
Simms Oil Co.	935,315	542.085	1,477 400
Amerada Petroleum Corp.	244,105	375,886	619,991
American Refining Co.	129,393	138,779	268.172
At antic Oil Producing Co.	704,083	294,515	998,598
Bridwell & Heydrick	117,377	132,834	250,211
Barkley & Meadows	88,482	95,263	183,745
L. T. Burns	175.647	73 303	248.950
Cranfill & Reynolds	96,495	134,821	231,316
The California Co.	236,176	231,783	467.959
Church-Weekly-Fields	126,333	2,623	128.956
Cromwell & Pickrell	105,680	*	105.680
Crown Central Petroleum Co.	90,526	110,412	200,938
Dixie Oil Co.	293,464	267,201	560 665
Dixon Creek Oil Co.	*	461.127	461,127
Derby-Haines & Williams	133,273	209.887	343.160
Echo Oil Co.	133.435	166.334	299.769
Empire Gas & Fuel Co.	282,084	584.548	866,632
Eastland Oil Co.	649,284	124.378	773.662
Fain-McGaha Oil Corp.	198,773	157,262	356.035
Grayburg Oil Co.	231.218	253,778	484.996
Humphreys Corp.	114.887	109,244	224.131
J. K. Hughes Dev. Co.	568.242	329.720	897.962
Independent Oil & Gas Co.	220,272	174.289	394,561
F. E. Kistler & Co.	122.587	211,586	334,173
Manhattan Oil Co.	93.017	*	93.017
Midwest Exploration Co.	343,768	366.835	710.603
McCarty Oil Co.	139,723	63.744	203 467
Mid-Kansas Oil & Gas Co.	433.223	195,955	629.178
James E. McKanne, Agent	174,234	*	174.234
Milham Corp.	136,066	135.225	272,291
J. C. Maxwe'l	137,569	19.382	156.951
Navarro Oil Co.	161,082	97.507	258.589
Nunn-McCauley Oil Co.	64,333	94.491	158 824
Pantex Oil Co.	80,750	124.909	205.659
Panhandle Refining Co.	102.732	86.267	188 999
Petroleum Producers Co.	178,184	142,891	321,075
Rycade Oil Corp.	197.173	123.560	320.733
Roeser & Pendleton, Inc.	298,769	538.386	837.155
E. C. Stovall	182,705	94 990	277.695
Sun Oil Co.	609,760	346.607	956.357
Skelly Oil Co.	344,982	370 825	715.807
Sinclair Oil & Gas Co.	371,000	502.178	873.178
Texas Pacific Coal & Oil Co.	468,631	241,261	709,892
Tidal Oil Co.	373.516	196.288	569.804
Transcontinental Oil Co.	130,068	236,627	366.695
H. F. Wilcox Oil & Gas Co.	205 012	198,329	403.391
L. H. Wentz	115,350	41,890	157,240
White Eagle Oil & Refining Co.	156.409	172,596	329,005
Total	42,754,741	42,213,740	84,968,481

*Not given.

NET PRODUCTION OF LEADING PRODUCING ORGANIZATIONS IN OKLAHOMA IN FIRST HALF OF 1927

	Second Quarter	First Quarter	1927 Ttl. First 6 Mos.
Carter Oil Co.	6,584,558	4.140 542	10.725,100
Magnolia Petroleum Co.	3,393 555	2,405,809	5,799,364
Prairie Oil & Gas Co.	2,976,605	2.849.727	5,826,332
Gypsy Oil Co.	2,931.207	3.076.784	6.007,919
Amerada Petroleum Corp.	2.711.934	2.182.057	4.893,991
Sinclair Oil & Gas Co.	2,560.816	3.402,519	5.963,335
Indian Territory Illuminating Oil Co.	2,147.923	1.284 780	3.432,703
Pure Oil Co.	2,111,045	2.059.254	4,170.299
Mid-Continent Petroleum Corp.	1,934.208	1.849.705	3,783,913
Comar Oil Co.	1,388.501	1.834.389	3.222.890
Barnsdall Oil Co.	1,351,310	1.445.521	2,796,831
Phillips Petroleum Co.	1,209.017	1,248.106	2,457.123
The Texas Company	1,104.561	976,173	2.080,734
Tidal Osage Oil Co.	1,052.322	1,503.486	2,555,808
Roxana Petroleum Corp.	1,023.841	884.444	1,908.285
T. B. Slick	381.592	777.138	1.158.730
Marland Oil Co.	942.650	678.791	1,621,441
T. B. Slick, Inc.	573.937	637,404	1.211,341
Empire Gas & Fuel Co.	856.932	303,537	1,160,469
Skelly Oil Co.	577.165	526 261	1,103,426
Turman Oil Co.	541.204	194.895	736.099
Independent Oil & Gas Co.	541.000	679.878	1.220,878
Kewanee Oil & Gas Co.	531.010	746.264	1,277,274
Atlantic Oil Producing Co.	490 031	432 579	922,610
Shaffer Oil & Refining Co.	421.000	348.864	769,864
Humble Oil & Refining Co.	417,169	437.466	854,635
Dixie Oil Co.	411.000	415.000	826,000
Twin State Oil Co.	371.988	238.572	610,560
Superior Oil Corp.	371.139	430.096	801,235
Tidal Oil Co.	345.358	401.146	746,504
Wentz Oil Corp.	328.521	367,107	695,628
Mid-Kansas Oil & Gas Corp.	288.110	203.197	491,307
H. F. Wilcox Oil & Gas Co.	283.668	158 361	442,029
Wolverine Oil Corp.	213.956	216.056	430,012
Josey Oil Co.	198 193	302.371	500,564
Kingwood Oil Co.	197,340	87,545	284,885
Westland Oil Corp.	191,804	213.055	404,859
Transcontinental Oil Co.	188.993	250.771	439,704
Gilmer Oil Co.	168.006	37 814	205 814
Champlin Refining Co.	166.080	95.207	261.207
Foster Petroleum Corp.	160.689	256 970	417 659
Westheimer & Daube	124,245	146,249	270.494
Minnehoma Oil Co.	111,784	80.308	192.092
Devonian Oil Co.	111,145	120.904	232,049
Philmack Oil Co.	110.000	117 814	227.814
Burke-Greis Oil Co.	113,000	119,000	232,000
Total	45.210.032	41,163,856	86,373,888

Forty-six companies and individuals produced 86 373,888 bbls. net or about 64.9 per cent of the entire gross, the remainder or 35.1 per cent being owned by 13,500 companies, firms and individuals figuring either as producers or royalty owners.

Carter's Mammoth Production

The tremendous production of the Carter Oil Co. in the first half of the year come principally from its holdings in the Seminole Field. Its total net production of 10,725,000 bbls. in the first six months of the year indicated an average of 59,254 bbls. per day or a gross of approximately 66,500 bbls. a day. At the close of June the company had 1,656 oil wells in Oklahoma, but of these 382 were in Nowata County and were old wells averaging about half a barrel a day. Excluding these the company had 1,274 wells that averaged a little more than 53 bbls. a day per well gross.

In order to get a better mental grasp on the immensity of the production of this one operating company we will compare it to the production of whole fields. The Carter Oil Co. itself produced a gross of 12,036,500 bbls. from 1,656 wells in Oklahoma in the first half of the year. In the same period 13.850 wells in New York State produced 1,101,000 bbls; 77,900 wells in Pennsylvania produced 4,750,000 bbls.; 14,000 wells in southeastern Ohio produced 1,120,000 bbls.; and 20,100 wells in West Virginia produced 3,842,000 bbls. The above wells in the Eastern Field produced all of the famous Pennsylvania grade crude. A total of 125,850 wells produced 9,993,000 bbls. of oil in the first half of the year. In order to approach the total of the Carter Oil Co.'s production in Oklahoma, we must add most of the production of the Trenton Rock and other fields of Ohio to the above total of 9,993,000 bbls. The combined production of New York, Pennsylvania, Ohio (southern and northern), and West Virginia averaged 70,800 bbls. a day or 4,200 bbls. a day more than the Carter Oil Co.'s gross output. The Carter's production exceeded that of Wyoming and Colorado; was greater than the production of the State of Louisiana and exceeded the combined production of Indiana, Illinois, Kentucky, Tennessee, Montana and New Mexico, in the same period. It was 57 per cent more than the combined production of the Mexia, Powell, Wortham, Richland, Currie and Nigger Creek Fields in the same months. Outside of the Seminole area there was not a field in Oklahoma that produced as much as the Carter Oil Co. and the number of fields in the United States averaging above 66,500 bbls. a day for the six months can be counted on your fingers.

T. B. Slick's Great Record

But while going to all this length to show the large output enjoyed by the Carter Oil Co., owned and financed by the powerful Standard Oil Co. of New Jersey, let us get down to a one-man proposition. We must not overlook Thomas B. Slick. Here is a lone producer who is always competing with the financial giants of Standard, Gulf, The Texas Company, Sinclair and Royal Dutch-Shell. Mr. Slick is credited with a net production of 2,370,071 bbls. which means a gross of approximately 2,666,330 bbls. in Oklahoma, which exceeds the total production of Montana in the same period. It took 43,326 average Pennsylvania oil wells to produce an amount equal to the production credited to Mr. Slick and as Mr. Slick is himself a Pennsylvanian hailing from Clarion, Pa.,

(Continued on Page 156)

Congress to Attempt Regulating Oil

Schemes for Restrictive Legislation May Go Far Beyond Plan for Unit Operation

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, Aug. 20.—That the petroleum industry faces the almost certain enactment of regulatory legislation during the coming session of Congress is the belief of many well-informed oil men here. Radicals have been advocating restrictive measures for some years, but it is the Seminole situation which has given the proponents of government interference the best chance they have ever had to actually put some measure across.

Many oil men here are not of the opinion that the industry can be sure that any measure passed will be constructive, although this seems to be the thought in many quarters. News from Washington is to the effect that the Oil Conservation Board will propose some plan for unit operation of pools. If the oil industry has no hing worse to fear than that, it can rest easily. However, some authorities fear that the oil industry will have worse than that to contend with before the next session of Congress is over.

The situation with relation to possible oil legislation is entirely different than ever has existed before. The basis of former attempts to control the oil business has been high oil prices. The basis of the coming onslaught will be the claim that the oil business has failed to regulate itself. Legislation will be asked for reasons diametrically opposed to those advanced previously. This will not in any way deter proponents of radical measures, however.

In fact, students of the situation say that the whole question of interference, constructive or otherwise, in the oil business is more acute than at any previous time in the history of the oil business. They point out that this is the first time the industry has gone on record (or any considerable portion of it) as being in favor of any form of regulation, and advance as proof the appeals made by oil producers at the time of the Seminole agreement. Now some form of unit pool operation, regulated by state and Federal Government, has actually been proposed by prominent oil men. The radicals will doubtless stress this situation for all it is worth. One chain of newspapers which formerly backed the late Senator LaFollette, has persistently campaigned for complete government regulation of the oil business ever since the Seminole affair, and it is believed the same organization is ready to back definite measures which will be proposed at the next Congress. According to oil men who have watched things closely powerful radical interests are not after any such regulation as embodied in supervision of unit pool operation, but what they really want is government operation of every branch of the business. The same oil men warn the industry against too much confidence in regard to what may take place when Congress is in session.

The petroleum industry as a whole places its chief reliance in the fight for legislation which it now admits is bound to come in the influence of the Oil Conservation Board and in the Coolidge administration. The Oil Conservation Board, according to unconfirmed but credited reports, may recommend enactment of a measure in Congress to provide for unit operation in the oil fields under Federal supervision.

The way lies open through the Government's supervision of public and Indian oil lands. Legislation enabling the Interior Department to operate the public and Indian oil lands by the unit pool method would be the first step in a logical sequence resulting in Federal supervision of unit pool operation all over the country.

Measures which are expected to be introduced by several well-known members of Congress go far beyond this point. Senators Borah, Norris and La-Follette are said to have oil bills ready to introduce. Most of these measures have been worked up since Seminole became a big factor in the situation, and it is understood they go far beyond the field covered in the Seminole situation.

Might Be Serious Mistake

Some oil men believe that any form of regulation passed by Congress would seriously restrict domestic oil production, or that, once restricted, it would not be so easy to increase output if it were necessary; therefore, they point out that such a measure would prove a boomerang to the political hopes of its sponsors.

In some quarters the belief is expressed that any measure which would seriously restrict oil production would prove a blow to the American oil industry by encouraging the importation of foreign crude and refined oil. Looking at the question in its international aspects, therefore, the United States alone would be the sufferer, in other words. American consumers of oil and the American oil industry.

The point is, therefore, emphasized that proponents of radical regulatory measures will do well to consider the possible effect their bills would have, if passed, not only on their own personal poltical fortunes, but also on the American people.

Senator Trammell Talks

An International News Service Washington dispatch says:

The new Congress may be called upon to regulate the oil and gasoline industry.

While America's "black gold" industry suffers from overproduction and its own executives seem unable to curb it, congressional leaders here are awaiting the report of the Federal Trade Commission on its recent investigation of gasoline, crude oil and kerosene prices. The inquiry was ordered by the Senate when it adopted the Trammell resolution nearly a year ago. Since the start of the inquiry, oil and gasoline prices have decreased, although oil men credited the lower prices to the overproduction situation.

The question of Government regulation will depend on whether the commission reports to Congress that the oil companies were "arbitrarily fixing prices by agreement." The commission was instructed particularly to inquire into this phase of the oil situation.

This investigation, it was said, has been virtually completed. The report, however, may not be made public until Congress returns in December.

Senator Trammell, Democrat of Florida, who sponsored the inquiry, declared he would sponsor additional legislation for control of oil and gasoline prices if the commission believed such action necessary.

"If the report is such as to indicate further legislation by Congress is needed," said Trammell, "I shall introduce it. It is my purpose to prevent oil companies arbitrarily fixing high prices for a commodity so much in general use and upon which so much of our industrial and social life depends. It is a significant fact that since this resolution was adopted by the Senate and the commission started its inquiry, oil and gasoline prices have materially declined."

Necessity for Legislation Beyond Question, Requa Says

By M. L. Requa

The necessity for some federal legislation relating to conservation of petroleum is so obvious that it needs no discussion.

There will probably be numerous proposals presented to the next Congress. The danger of the situation is that such proposals will be impracticable and do more harm than good.

I have been giving careful consideration to the matter for some time and at present am engaged in an effort to formulate something that will be practical and beneficial. If I succeed and become satisfied that I can offer some constructive proposal, it is my intention to go to Washington about the time Congress assembles, and to offer my suggestions for consideration by Congress.

I am not prepared at this time to present any definite program. In the preparation of this program, I invite suggestions from members of the oil industry as to what, in their opinion, is desirable of accomplishment and how. Any help that they may be able to give and any suggestions received will be given full consideration and will be considered as confidential if so requested.

I am taking this action solely upon my own responsibility and shall speak on behalf of the American people. It is purely an independent move of my own in which I am associated with no one. I shall probably have some more extended statement to make at some later date. At present I have not sufficiently developed my views to make it wise for me to attempt any more detailed explanation.

I am working upon a subject that I believe to be of profound national importance and I shall welcome co-operation on a constructive basis.

I am working on the same theory of control that governed my activities as General Director, Oil Division, United States Fuel Administration; that is, that the industry can govern itself wisely and well if it will, calling upon the Government only when necessary to make co-operative activities possible.

I propose to rely largely upon the weight of public opinion and for this purpose hope to enlist the support of the press in presenting the facts to the public. I am sure that once in possession of the facts the public will co-operate sympathetically in reaching the proper solution of the problem of rational conservation.

In conclusion I offer the definition of conservation which is the most satisfactory one that has come to my attention:

*"True conservation is not hoarding, but the wise use of natural resources; and it implies not merely the preserving in unimpaired efficiency, but also a wise and equitable exhaustion with a maximum efficiency and a minimum waste. * * * Conservation, therefore, demands intensive rather than extensive use; takes cognizance of equitable distribution; aims to bring about social justice, and means the greatest good to the greatest number—and that for the longest time."*

PECOS COUNTY OPERATORS TO ACT ON PRORATION ON SEPTEMBER 2

By P. L. McGreal

HOUSTON, Tex., Aug. 22.—Representatives of 10 companies having production or undeveloped acreage in Pecos County, Texas, met here Thursday at the general offices of the Humble Oil & Refining Co. to discuss the prorating of runs from the Yates Field in that county, with W. S. Farish, president of the Humble company. The meeting was held at the invitation of Mr. Farish. It lasted for two hours. No decision was reached. The representatives asked for time to confer with their executives and another meeting will be held at Fort Worth on September 2, at which some decision is expected.

The following companies were represented: Simms Oil Co., Roxana Petroleum Corp., McMan Oil & Gas Co., Marland Oil, Pure Oil, California Co., Mid-Kansas Oil & Gas, Independent Oil & Gas, Allsman & Bell Co. and Wheelcock & Collins. The Phillips Petroleum Co. was not represented.

The meeting was not open to the public, being characterized by Mr. Farish simply as "a business meeting between the Humble and its customers through its pipe line to determine how best the Humble might serve their demands."

The question of production curtailment was not discussed, it was brought out, though it was admitted that with pipe line prorating either curtailment or a storage program was the logical sequence. Transcontinental Oil Co., which, with its operating partner, the Mid-Kansas Oil & Gas Co., holds the key to the future drilling here, was not represented at the meeting, though representatives of the Mid-Kansas were there.

Gulf Production Co., which is a prospective producer in the Pecos area, was

(Continued on Page 100)

Louisiana Gas to Serve Five States

Active Competition for Gas Rights From North Louisiana Fields. Many Proposed Lines

By Neil Williams

SHREVEPORT, La., Aug. 22.—The importance of North Louisiana as a gas producing area is coming more and more into the limelight with the competition which has existed here the past few months for gas rights and the interest taken in the laying of an extensive system of major lines over the central southern states having fields of this district as their converging point.

Transporters and distributors of natural gas for industrial and domestic consumption evidently have their eyes on North Louisiana as a source of supply. Major lines representing a total investment ranging from $20,000,000 to $25,000,000 are under construction or will be started within the next few months.

Lines actually assured, together with proposed extensions which seem certain, will take gas from this district into at least five states and possibly a sixth. Louisiana, Arkansas and Texas already are burning North Louisiana gas but additional projects are under way which will make the use of this gas more extensive in these three states.

In addition, proposed lines, beyond the mere talking stage, are under consideration and steps are being taken to make their construction definite whereby Tennessee and Mississippi would be linked with fields here. And, rumors have it that one of the larger companies has its aspirations on St. Louis, Mo.

Major Lines

Major lines, either under construction or on which work will begin in the near future, which will draw their gas supply from North Louisiana fields, include the following:

1. Interstate Natural Gas Co., extension of Monroe-Baton Rouge line to New Orleans.

2. Dixie Pipe Line Co., construction of line to Houston and Port Arthur, Tex., from Waskom, Tex., just over the Louisiana line.

3. Electric Bond & Shares interests, represented by the Natural Gas Producing Co. and the Excelsior Pipe Line Co., construction of a line from the Monroe field to Camden, Ark., by way of El Dorado, Lisbon and Smackover.

4. Northwest Louisiana Gas Co., laying of a line from Homer to Arcadia, La., and an extension to Ruston to connect with the Monroe-Ruston line.

In addition, the Natural Gas & Fuel Corp. of El Dorado, Ark., has just leased the old Crusader Pipe Line Co.'s 18-inch line from the Continental Supply Co., which acquired it at a receiver's sale. This line, built to transport oil from Smackover, Ark., to a point on the Mississippi river at Vidalia, La., never has been used for that purpose and now will be put into service in transporting gas from Richland Parish, La., and the Monroe Field to El Dorado and that district served by the Natural Gas & Fuel Corp.

North Louisiana Lines

Within North Louisiana itself there already is an elaborate system of gas lines, both trunk and laterals, and in addition three other main lines lead out of the district. These are the Arkansas Natural Gas Co.'s 16-inch line from the Caddo Field to Malvern, Ark., where it branches to Hot Springs, Little Rock and Pine Bluff; the Magnolia Gas Co.'s 18, 16 and 14-inch Sarepta-Waskom-Beaumont line, and the Magnolia Gas Co.'s duplicate line from Waskom to Dallas, Texas. The latter two have been put into operation within the past year, as has the Interstate Natural Gas Co.'s Monroe-Baton Rouge line.

The above systems, including both the completed and projected lines, serve only Louisiana, Arkansas and Texas but plans are under way for the extension of the Electric Bond & Shares' Monroe-Camden project to Pine Bluff, Ark., and thence to Memphis, Tenn., giving the latter place its first natural gas. The Electric Bond & Shares interests are reported to control the artificial gas system already in existence at Memphis and a link with its natural gas reserves and lines would seem only logical.

May Serve Mississippi

As for serving Mississippi, that is more or less indefinite but such a project is under consideration as the new Richland Parish gas field is only a comparatively short distance from that state, and very little trunk line would be required. The interests controlling the Ruston Drilling Co. have made known that a line will be built from the Richland Field if distribution franchises can be obtained at Jackson and Vicksburg, Miss. The franchise at Jackson already has been voted.

With all these lines, when completed, together with those already in operation, supplying a rapidly increasing domestic and industrial demand for natural gas, there will be a drain of hundreds of millions of feet of gas daily from North Louisiana. As a result, there being a big question whether the reserve of this district may be adequate to supply the anticipated needs of these large gas projects, there has been a scramble among these companies to contract for gas production, acquire rights and build up an extensive acreage of potential gas property.

In fact, so keen has been the demand for gas reserves and so unfavorable has been the oil situation, that from present indications the drilling for gas and the opening of new gas fields may become the prime motive for operations in this district letting production of petroleum become a possible sideline.

Monroe Field

As to the extent of North Louisiana's future gas reserves, no one can foresee. The Monroe district of the northeastern part of the state, the largest gas field both in area and flow, naturally is North Louisiana's biggest reserve. A recent survey by the Louisiana Department of Conservation figured the open flow capac-

(Continued on Page 158)

More Capital Needed By Industry

Borrowings Last Year Amounted to Half Billion. Present Ease of Money Market Factor in Expansion Plans

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, Aug. 22.—With oil company borrowing during the past year approaching $500,000,000, financial authorities here are anticipating further loans as a result of current developments in the oil industry and the unprecedented ease in money rates.

The unusual flood of oil financing in recent months has caused considerable comment, some of it calculated to give the impression that the petroleum industry is over-borrowing.

The petroleum industry of the United States has assets approaching $11,000,000,000, according to latest estimates by leading executives. An inventory of the balance of leading oil companies shows that the petroleum companies representing some 90 per cent of this total of assets have an aggregate funded debt of approximately $1,000,000,000, including all issues outstanding. The railroad industry, with assets of $23,000,000,000, has a funded debt outstanding of approximately $15,000,000,000. It seems from this that the petroleum industry can do considerably more borrowing of this nature without being overburdened with debt.

At the same time it must be remembered that a leading oil official recently sounded a note of warning to the industry with regard to over-borrowing. The matter all comes down to the question of discretion as regards individual companies.

Borrowing for long terms either through the issuance of notes or bonds is usually for the purpose of providing investment capital to take care of current expenditures. In addition, much financing has for its purpose the reduction of interest charges and does not involve any increase in outstanding debt. Individual note or bond issues can have all three purposes in view.

The fact is, as indicated by the figures given above, that many leading oil companies have been extremely conservative with regard to public financing. Their policy has been to finance so far as possible from current surplus earnings. At the close of 1920 the leading Standard Oil units had aggregate funded debt of less than $30,000,000, although their assets approached the $3,000,000,000 mark.

Conditions Necessitated Change

The change in policy by many petroleum companies shortly after the close of the World War, whereby money was borrowed through the issuance of notes and bonds offered for public subscription, directly or through banking syndicates, was due to several causes. One of these was the unprecedented increase in oil consumption, which forced corresponding expansion in facilities to keep pace with it. This expansion was so great that it could not be financed from current or surplus earnings, and it was deemed more sound financially to go to the public for part of the necessary funds.

Financing, in addition to the routine borrowing, was also brought about by the need for larger working capital to carry on a much larger volume of business.

There was a comparatively large amount of public financing by petroleum companies in 1919 and 1920, the largest item being an offering of $200,000,000 preferred stock by the Standard Oil Company of New Jersey. Many other Standard Oil units followed the plan of issuing preferred stock, usually bearing a 7 per cent dividend rate. In addition other oil companies were heavy borrowers through note, bond or stock issues.

At the close of 1920, however, the oil industry had comparatively small funded debt. Forty leading oil companies showed a total of only $195,168,000. They had an aggregate capitalization, including bonds, of $2,178,568,000, and their combined assets were $5,086,516,000.

Situation Again Changes

The seven years which have passed since 1920 have brought numerous changes in the petroleum industry, and a new set of conditions now exists which is resulting in a new era of public financing by petroleum companies. One circumstance which differs materially from the situation in 1920 is the present ease in money, meaning that there is a large amount of public money available for investment.

This condition in itself is responsible for much of the new oil financing. Companies having bonds or notes outstanding, bearing an interest rate of 6½ or 7 per cent, have in many instances refunded them by means of their redemption and the issuance of bonds or notes bearing interest at the rate of between 5 and 6 per cent. Many companies which had 7 per cent preferred stock issues have replaced them with bonds or notes bearing a lower rate.

In the past year and a half, financing by leading petroleum companies has totaled something like $500,000,000, and in the opinion of many financial authorities further loans can be anticipated, due to the unprecedented ease in money. It is pointed out that present conditions in the money market cannot be expected to last indefinitely, and that perhaps many oil companies which have not already done so will take advantage of this situation. It is known that several oil companies which have not done any recent public financing have been approached from time to time by bankers anxious to handle bond or note issues.

Public financing has not appealed to many oil companies, for the reason that it must be handled through banks, which act as sort of middle men between the companies and the investors. Many leading oil companies have always handled borrowing through the granting of subscription privileges direct to their own stockholders or else through private loans by banks. In fact, some leading companies have done practically no financing aside from routine loans of 30 days to six months, but have depended almost entirely on surplus earnings.

Contrast With Railroads

A contrast with the situation in the railroad industry serves to bring out clearly the relative position of the petroleum industry with respect to public financing. The railroad industry has always worked in close harmony with the banks, and many of the leading railroads are, in fact, controlled by private banking interests. For this reason the railroads have been more free to borrow publicly, with the banks as agents.

Whether present conditions in the money market, due to a plethora of investment funds, will result in any change in attitude on the part of those oil companies which have remained aloof from public financing or not is a question. In some quarters it is questioned whether they can afford to overlook the opportunity to borrow money on terms exceptionally favorable to themselves, and still take care of big expansion in competition with other companies which have borrowed large sums at low cost for the purpose.

Reputation

The costly, long-drawn out process, which was necessary to establish NEWTON ABSORPTION GASOLINE PLANTS in the estimation of gasoline manufacturers has proved to be the *most profitable*, and at the same time, the *shortest* route to the Industry's Good Will.

For the Industry knows now that NEWTON EFFICIENCY AND NEWTON ECONOMY is to be had only in the "Profit Process"—made possible only by the most advanced principles of absorption plant design to be found on the market. Thoroughly convinced that the amazing results predicted for Newton Plants are actually a reality, they unhesitatingly place their confidence in them; and see their judgment vindicated through the unparalleled performance of Newton Plants in practically every oil state in the union. The increasing number of Newton installations serves to strengthen Newton's already enviable position, and the conviction that Newton Plants are the "MOST ECONOMICAL—MOST EFFICIENT."

Representatives

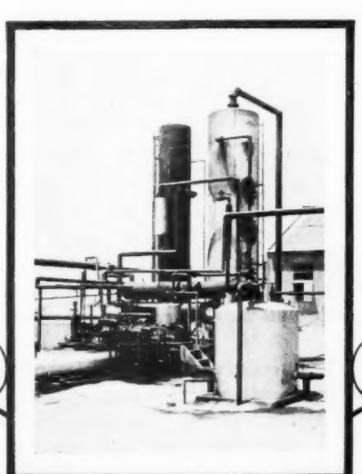
HURLEY BROTHERS
Kennedy Bldg.,
TULSA, OKLA.

THE NATIONAL SUPPLY CO.
General Offices, Toledo, O.
and All Stores

Foreign Representatives
THE NATIONAL SUPPLY CORP.
120 Broadway,
New York

MOST EFFICIENT—MOST ECONOMICAL

"Newton Process Is the Profit Process"

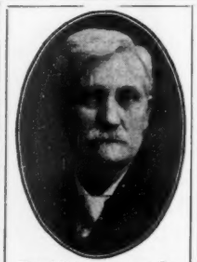


NEWTON PROCESS
MANUFACTURING COMPANY
FULLERTON, CALIFORNIA

The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

Published Weekly by
THE PETROLEUM PUBLISHING COMPANY
114-116 West Second Street
TULSA, OKLA.



Established as an International Publication in 1910 by Patrick C. Boyle

President - - - - - - - - - - - - Frank T. Lauinger
Vice President and General Manager - - Robert W. Egan
Secretary-Treasurer - - - - - - - - - - W. T. Bryan
Editor - - - - - - - - - - - - - - James McIntyre
News Editor - - - - - - - - - - - Andrew M. Rowley
Associate Editor - - - - - - - - - - - W. T. Anderson
Refinery Editor - - - - - - - - - - - C. O. Willson
Technical Editor - - - - - - - Charles K. Francis, Ph.D.
Advertising Manager - - - - - - - - - Clarence Morris
Circulation Manager - - - - - - - - - J. P. Mulkern

DISTRICT ADVERTISING OFFICES

C. L. CAIN - - Room 629, 101 Park Ave., NEW YORK CITY
E. KLAPPENBACH, 1328 Peoples Gas Bldg., CHICAGO, ILL.

TERMS OF SUBSCRIPTION
(By Mail, Postage Prepaid)

Single copies - - - - - - - - - -	$ .15	One year (in United States) - - -	$6.00
Three months - - - - - - - - - -	$2.00	One year (in Canada) - - - - - -	$7.00
Six months - - - - - - - - - -	$3.00	One year (foreign countries) - - -	$7.00

ADVERTISING RATES ON APPLICATION
Telephones: 6291-6292-6293
Remittances by Checks, Drafts, Express or Postal Money Orders should be made payable to
The Petroleum Publishing Company
Cable address, "Oilgasnal"

MEMBER AUDIT BUREAU OF CIRCULATIONS

GASOLINE TRANSPORTATION COSTS

Efficiency in refining has become so general that competition has to look elsewhere for advantage.

Even size of operations no longer counts as the small manufacturer may be just as efficient and make as varied special by-products, while costs of manufacture run about the same.

More and more it is being found that the determining factor is the cost of transportation.

Unfavorable location is a distinct disadvantage and may be the controlling element in successful distribution of products.

A special article dealing with this phase published in this issue of The Oil and Gas Journal will repay study.

There are two basic facts beyond control. On the one hand the raw material—crude oil—has to be obtained where it is found. On the other, the refined products must be sold where the market is.

Eighty per cent of the crude produced comes from three states, Oklahoma, Texas and California. The great market for gasoline is east of the Mississippi. These three states produce five times as much crude and manufacture three times as much gasoline as they can consume.

Thirty states, including the District of Columbia, do not produce crude oil. Ten other states do not produce sufficient crude oil to supply their own gasoline requirements. This means that the country as a whole is dependent on nine states for the bulk of its crude oil supplies.

Twenty-two states, including the District of Columbia, do not have refineries located within their boundaries. Seventeen of the remaining states do not refine enough crude oil to take care of the gasoline consumers within those states. This has resulted in a situation in which the gasoline requirements of 49 states must be transported entirely or partially from plants located in ten states.

Wyoming produces 12 times as much crude and almost ten times as much gasoline as its entire consumption which could be supplied by a 5,000-barrel plant.

Oklahoma is at the present time producing one barrel of oil for every gallon of gasoline consumed within the state.

Ohio, on the contrary, refines twice as much crude as it produces and consumes six times as much crude and three times as much gasoline as it makes. Similar situations exist in other states.

The effect is that the gasoline market in Ohio is established by the motor fuel shipped from outside the state.

Obviously a refiner seeking expansion would find it more advantageous to locate in or adjacent to a state like Ohio where he could absorb the transportation advantage than in a state which already is producing more gasoline than it can consume or dispose of in the transportation territory natural to it.

When the effect of transportation costs as the determining factor are fully understood there will be a notable change in refining plans unless there is a radical change in the relation of transportation costs.

If the railroads were wise they would anticipate such contingencies by co-operating rather than antagonizing the refining industry. Otherwise they may discover too late that they have killed the goose that laid the golden egg.

With competition so keen and operating costs so equalized that transportation charges are about the only advantage in marketing products it would seem that the railroads might profit by wholehearted co-operation with the refining industry rather than seeing sales go to districts in which they have no interest.

The origin of the pipe line system of oil transportation, adopted because of the attitude of the rail carriers in early days, should be familiar to railroad men. They may find it significant that within the past five years the establishment of refineries on coastal locations or on inland waters offering cheap water transportation has been a marked feature of the industry.

In the case of California and Texas water transportation gives them access to the coastal markets.

A combination of rail and water transportation for the shipment of finished products has become a feature of the situation in New England. Wherever possible the refining industry is turning to cheaper means of transportation as tipping the balance in present-day marketing competition.

This situation has been aggravated by the disposition of railroads in advancing their rates.

The solution might be simpler for the refining industry if there was any certainty about the location of its sources of raw material. But this has to be taken into consideration no less than the location of the consuming market for its products.

The extension of natural gas lines long distances to great centers of consumption which have not heretofore enjoyed the use of that fuel, and the great expenditures in extending oil lines into remote producing fields indicates what may happen, the location of refineries in states which do not produce oil but are rapidly increasing markets for petroleum products.

Some such solution would seem likely if transportation costs continue to be a controlling element in the marketing of output.

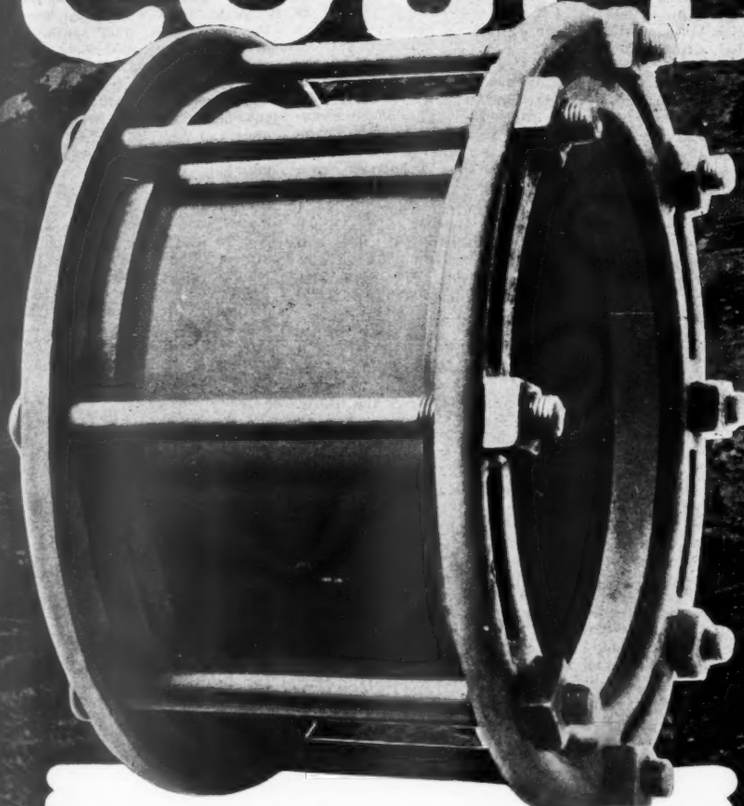
The facts and figures and map printed in this issue showing crude production, refined output and consumption of petroleum products by states will furnish valuable information to the refining industry, as much for indicating where refining expansion is superfluous as for showing where it might be profitable.

While gasoline consumption is universal in the United States it is not uniform. The needs of some states are but a small portion of the requirements of others. Customers in some sections are scattered over wide areas and transportation costs are high even after reaching the bulk stations.

Gasoline consumption is increasing in practically all states, with the possible exception of Florida, which had a temporary boost in demand during the realty excitement a year or two ago. But in states where the gallonage is small and marketing facilities are more than adequate there is no justification in further expansion of distribution outlets.

The bulk of the gasoline—over half of it—is consumed in ten states. The bulk of the increase in consumption is likewise in those same states. This means that expansion programs should be centered in such states. And transportation costs are a chief factor to be studied. The significance of this should not be lost upon the refining industry or by the transportation agencies which have shown so little consideration for an industry which furnishes them with so much highly profitable business.

DRESSER COUPLINGS



Here is another illustration of the great strength and utility of Dresser Couplings. It is a 30" water line, or flume, in Utah—installed in connection with a Hydro-Electric plant.

S. R. DRESSER MANUFACTURING CO.
Bradford, Penna.

Dominate!

Important Extension to Pecos Field

Two and a Half Miles Southwest of Nearest Producer. Three Other Pecos Completions. Winkler Wildcats Sickly

By C. D. Lockwood
Staff Correspondent, North and West Texas

FORT WORTH, Tex., Aug. 22.—Most of the important West Texas news this week came out of Pecos County where four new producers were brought in, three of which were inside wells, the poorest having flowed 457 bbls. an hour, and the other extended the field about 2½ miles giving it a total breadth of approximately 5 miles. Mid - Kansas and Transcontinental Oil Co.'s No. 3 Yates-B in the SE cor. of Section 61, offsetting the River Bed producer, was reported last week as flowing 247 bbls. the first 13 hours at 888 feet. It was deepened to 913 feet and in one hour during the morning of August 17 flowed 525 bbls. The following hour's gauge was 457 bbls. and it was then shut in to place a 5-16-inch choke.

Offsetting this remarkable producer on the south, Marland Oil Co.'s No. 1 Yates-A in the NE cor. of Section 60 topped the pay at 960 feet and made a couple of heads while drilling at 988 feet. At total depth of 1,024 feet it filled four 4,500-bbl. tanks in four hours and was shut in for more storage.

Mid-Kansas and Transcontinental's No. 7 Yates-A, just west of the SW cor. of Section 61, in the vicinity of the No. 1 Yates-B and No. 4 Yates-A, topped the lime pay at 1,227 feet and when drilled to 1,277 feet flowed 457 bbls. the first hour. It was pinched in to a 3-16-inch choke.

Important Extension

About 2½ miles southwest of the Mid-Kansas and Transcontinental's No. 1 Smith-Taylor, the nearest producing well, Mazda Oil Co. and Red Bank Oil Co. have effected an important extension to the Yates Pool in their No. 1 Smith located in the NE cor. NW of Section 24, Block 194. This well was reported as flowing heavily late last week but while it did make some good flows, the heads amount to only about 20 bbls and come every 2½ hours or so. However, it may equal the other wells in the main part of the field when fully drilled in as total depth was 1,584 feet in pay topped at 1,581 feet. It was shut down for storage at latest report.

The Red Bank Oil Co., originally owned the north half of the Section in which this well is located, except the NE NE which was held by Roxana Petroleum Corp. Red Bank made a trade with Nichols, Ott and Groesbeck for a well on the west 140 acres of their 280 acres, giving them the east 140 acres for a 2,000-foot well or a commercial well at a lesser depth. Nichols and his associates then made a deal with the Mazda Oil Co. giving Mazda 80 acres for the drilling of the required test. This 80 acres comprised the NW NE and the W half SW NE and the east 20 acres of the NW of Section 24. That left Nichols and others 60 acres clear, comprising the SE NE and the E half SW NE of the section. Mazda Oil Co. sold a half interest in its 80 acres to the Savoy Oil Co. of Tulsa for $600 an acre and it is understood that two wells are to be drilled on this acreage owned jointly by these two companies. One is to be located 2,640 feet from the west line and 330 feet from the north line of the section and the other will be 1,980 feet from the east line and 330 feet from the north line. This explains the location of the No. 1 Smith, which is 660 feet west and 330 feet south of the NE cor. NW of Section 24 and not exactly in the NE cor. NW, as generally carried. Red Bank Oil Co. owns the full interest in the 140 acres on which the well is located and has taken charge of the well.

Six Extension Tests

Six extension tests are now under way in the northwest part of the Yates Pool at distances up to a mile north and west of the McMan & Marland gusher, which was reported last week. And the California Co. has started a south offset to that producer, known as No. 1 Yates in the NE cor. of Section 35, Block 194. Of five extension tests, two were reported last week. Simms Oil Co.'s No. 1 Smith in the SW cor. of Section 103, and Humble Oil & Refining Co.'s No. 1 Smith in the NE cor. of Section 36, Block 194. Roxana Petroleum Corp. then staked a location for a west offset to Simms Oil Co.'s No. 1, the location being in the SE cor. of Section 102, and McMan & Marland have offset both Simms and Roxana's locations. Their No. 2 offsets Simms and their No. 3 Yates offsets Roxana. Their No. 2 Yates is a north offset to Humble Oil & Refining Co.'s No. 1 Smith.

Allsman & Bell went too far up the Pecos River to drill their second riverbed well. It is shut down at 1,509 feet for orders, having had no showings of oil or gas and not even any water below 1,000 feet.

Gulf Production Co.'s east offset to the No. 1 Pecos River Bed encountered black sulphur water at 350 feet and was running 10-inch Monday to 360 feet.

Winkler Wildcats

Very little news of special interest came out of Winkler County this week except regarding a couple of wildcats which look rather sickly, and the fact that a test east of the Hendricks Pool has apparently found the east side of the structure, having topped the lime lower than Cranfill Brothers' Murchison & Marland's test. This well, which shows some east dip, is Southern Crude Oil Purchasing Co.'s No. 1 T-89 Grisham-Hunter-A in Section 35, one-quarter of a mile east of the Cranfill Brothers and others' well. It topped the lime at 2,308 feet, or 509 feet above sea level, which compares with 531 feet for the Cranfill Brothers' Murchison & Marland test and 504 feet for the Texon Oil & Land Co.'s No. 1 Hendricks.

Pure Oil Co.'s No. 1 Hendricks-B, NE cor. SE Section 34, Block B-5, topped the lime at 2,276 feet this week, which, with a surface elevation of 2,827 feet, gives it a sub-surface elevation of 551 feet on top of the lime. That is the highest lime elevation in the field so far.

Nothing new has happened at the Texon location except that the gas, estimated at 25,000,000 to 30,000,000 feet, blew the control head off and preparations are now being made to run the 5-inch casing. Total depth is 2,814 feet, or just 10 feet above sea level. Republic Production Co. made a new location a quarter of a mile east of this well, to be known as No. 1 Grisham-Hunter-B. It is in the SW cor. E half SE Section 41, Block B-5.

Southern Crude Oil Purchasing Co. made a new location this week for its No. 1 T-88 Ida Hendricks-C, NW cor. Section 28, Block B-5. This offsets Cranfill & Reynolds' No. 1 to the north. Texon Oil & Land Co. also started No. 2 Grisham-Hunter-B, NE cor. W half SW Section 45, Block 26.

Southern Crude is still deepening No. 1 T-88 Hendricks-A in Section 44, Block 26, and at 3,060 feet picked up still another pay streak which caused a nice increase in production. The flow was 920 bbls. Saturday. Top of pay is 2,930 feet.

The two wildcats which look rather pale are McCulloch Oil Co. and Marland Oil Co.'s No. 1 Tobe Morton, south of the Hendricks Pool, which was drilling below 3,100 feet in anhydrite, and the R. S. Matthews and others' No. 1 Cowden, in northeastern Winkler County, which was drilling at 3,020 feet Saturday in anhydrite.

Church-Fields Pool

The average initial production of new completions in the Church-Fields Pool of Crane County dropped off to some extent last week although the daily average production continued to mount and almost reached 100,000 bbls. Crane County's production during the past week was 98,958 bbls., and all but 1,308 bbls. was from the Church-Fields Pool. West Texas' total production climbed to 163,487 bbls., including Jones County.

Simms & Atlantic's No. 6 University-C in Section 47, Block 30, was the best well of the week in this pool. It had been flowing 1,164 bbls. August 14, after declining from an initial gauge of 1,956 bbls. from pay at 2,805-2,930 feet, and was shot last week with 270 quarts from 2,848-2,930 feet. It increased to 3,385 bbls. as a result.

Independent Oil & Gas Co. ran the tools in their No. 1 University-B, farthest north producer in the Church-Fields Pool, and cleaned it out a little. It was flowing about 395 bbls. before cleaning out and afterward increased to more than 1,800 bbls. It averaged 1,502 bbls. throughout last week. This will probably cause further drilling up the section line northward.

South of Landreth Strip

Eight new wells completed by Gulf Production Co., just south of the Landreth strip, averaged about 500 bbls. each. Gulf's No. 24 J. T. McElroy has not really been completed but is flowing 1,200 bbls. daily with two strings of tools in the hole. No. 25 was shot with 140 quarts at 2,805-2,903 feet and flowed 12½ bbls. an hour afterward; No. 26 flowed 260 bbls. of 32.3 gravity crude after a 180-quart shot at 2,807-2,935 feet; No. 27 flowed 25 bbls. an hour and was estimated good for 600 bbls. at 2,935 feet; No. 28 was estimated good for 528 bbls. after a 140-quart shot at 2,773-2,910 feet; No. 30 was shot with 135 quarts at 2,750-2,874 feet and flowed 720 bbls. the next 24 hours. It declined to 635 bbls. and will be shot again; No. 31 swabbed and flowed 215 bbls. at 2,739-2,873 feet and will be shot; No. 32 was shot with 120 quarts at 2,805-2,923 feet, total depth 2,931 feet and flowed 205 bbls. afterward; No. 33 flowed 380 bbls. after a 140-quart shot at 2,802-2,910 feet, total depth 2,935 feet; No. 34 swabbed 70 bbls. at 2,825-2,912 feet and is to be shot.

In Upton County, Gulf Production Co.'s No. 6 J. F. Lane swabbed 5 bbls. of sulphur water and one half barrel of oil at 1,969 feet. It will be deepened. This well is in Section 3, G. C. & S. F. Survey, one location north of Gulf's No. 2 Lane which was Upton County's record initial producer.

It offsets Prairie Oil & Gas Co.'s No. 3 Allie Lane, NE cor. SW SW of the section, which flowed 410 bbls. in the first 18 hours August 18 at 1,965-72 feet. Champlin Oil & Refining Co.'s No. 1 Lane, SW cor. SE, same location, offsetting Gulf's No. 4, made two flows over the derrick at total depth of 1,920 feet and was shut down to connect up.

Grosvenor Area

The Grosvenor area of Brown County, just northeast of the Fry Pool, is the most interesting area in North Central Texas. Roxana Petroleum Corp.'s No. 3 Smith was completed for 1,679 bbls. at 1,316-42 feet, total depth 1,343 feet, being the best well in the pool to date. Forest Oil Co.'s No. 6 Smith was flowing 30 bbls. an hour and No. 7 Smith 35 bbls. an hour. Roxana's No. 2 Smith, between Nos. 1 and 3, was drilled in early this week and is estimated good for 700 bbls. at 1,318-41 feet, or 23 feet of sand. Cranfill & Reynolds' No. 2 Smith topped the sand at 1,320 feet and was drilling in. It also looks like a good well.

In Young County, E. C. Stovall's No. 1 fee, SE cor. Lot 30, James Tobin Survey, A-279, the discovery well of the deep pay, was deepened from the 3,900-foot level to gray lime at 4,232-81 feet and flowed 780 bbls. the first 24 hours. Panhandle Refining Co.'s No. 7 McCluskey, the most consistent producer in Young County, has produced a total of 138,000 bbls. in 30 days and is still going strong, averaging about 5,000 bbls. daily. It has steadily increased.

Archer County

McGregor and Panhandle's No. 1 Framer had an initial production of 96 bbls. of oil and 2 bbls. of salt water at 1,483-85 feet. Art and O'Neils' No. 1 Wilson was dry and abandoned at 1,550 feet. Gynn and Carter's No. 2 Wilson

WILDCAT OPERATIONS IN WEST TEXAS

Week ending August 20, 1927

Company, Farm and Location—	Remarks—
ANDREWS COUNTY	
Calvin & Belt's No. 1 Ratliff & Bedford, C NE Sec. 16, Blk. A-54	Shut down for water 350 ft.
J. S. Cosden's No. 1 Ratliff & Bedford, C SE Sec. 8, Blk. 73, Public School Land	Shut down to repair rig 410 ft.
Sartain Oil Co. et al's (was Deep Rock Oil Co.'s) No. 1 W. J. Harris, C SE Sec. 12, Blk. A-46, Public School Land, elev. 3,167 feet.	Fishing tools 375 ft.
B. B. McKennon's (was Neff et al's) No. 1 J. S. Means, C SE Sec. 12, Blk. A-35, Public School Land	Drilling 500 ft.
A. G. Carter & Zweifel's No. 1 Cowden, C SE Sec. 18, Blk. A-52, Public School Land Sur., elev. 3,156 ft.	Top salt 1,375 ft.; shut down for orders 3,500 ft.; will deepen.
BREWSTER COUNTY	
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Drilling 740 ft.
Wilcox & Anderson's No. 1 Gage, Sec. 3, Blk. 300, T. C. R. R. Sur.	Drilling 400 ft.
COKE COUNTY	
W. H. Brown et al's No. 1 W. L. Foster, SE cor. Sec. 142, Blk. 2, H. & T. C. Sur.	Shut down for casing 425 ft.
Danciger O. & R. Co.'s No. 1 Mrs. Byrnes, Clinton Sur.	Shut down for 12-in. 855 ft.
Lipan Oil Co.'s No. 1 S. M. Conner, Sec. 71, Blk. 2, H. & T. C. Sur.	Cleaning out 1,215 ft.
CONCHO COUNTY	
Associated Oil Co.'s No. 1 Sam Waring, Sec. 2,035, J. W. Godhardt Sur.	Drilling 2,400 ft.
The Exploration Co.'s No. 1 Hartgrove, Blk. 240, J. Schouch Sur., Elev. 1,718 feet	Fishing casing 1,930 ft.
CRANE COUNTY	
Gulf Production Co.'s No. 2 Waddell, NE cor. Sec. 10, Blk. B-25, elev. 2,741 ft.	Top brown lime 3,068 ft.; set 6-in. 3,077 ft.; top gray lime 3,095 ft.; first oil 3,194-3,200 ft.; top pay 3,219 ft.; shut down for repairs 3,425 ft. in soft gray lime; flowed 32 bbls.

(Continued on Page 160)

was dry and abandoned at 1,557 feet. The Texas Company's No. 18 Turbeville-C had an initial production of 25 bbls. at 1,501-24 feet.

Brown County

Alford Oil Co.'s No. 1 Leslie made an estimated production of 15 bbls. of oil and 50 bbls. of salt water initial from sand at 1,342-44 feet. The well had dry sand at 1,331-36 feet, gas sand at 1,336-38 feet and water sand at 1,339-41 feet. Daniels and associates' No. 1 Curry was dry and abandoned at 1,377 feet. Two producers were completed on the Forest Oil Co.'s Smith lease. No. 6 did 160 bbls. initial at 1,334-46 feet. No. 7 was a 1,495-bbl. initial at 1,324-42 feet, total depth 1,344 feet. Foulcher and associates' No. 1 Thomason was dry and abandoned at 1,578 feet. Gibson Oil Co.'s No. 21 Shore was dry and abandoned at 1,721 feet. Kone Production Co.'s No. 3 Hickman made 10 bbls. initial at 1,220-36 feet. Roxana Petroleum Co.'s No. 3 Smith did 1,440 bbls. initial from sand at 1,316-42 feet. Terril & Morrisey's No. 2 Rumph et al had oil sand at 1,138-50 feet and sandy lime at 1,150-59 feet and made 65 bbls. initial. Wentz Oil Corp.'s No. 2 Andrews was dry and abandoned at 1,406 feet. Cranfill & Reynolds' No. 1 Short was plugged back from 1,197 feet and completed as a 7,500,000-foot gas well at 1,069 to 1,163 feet.

Callahan County

Hill & West's No. 1 Waller had sand at 1,667-85 feet and sandy shale at 1,685 to 1,708 feet and did 80 bbls. initial.

Coleman County

Loftin's No. 1 Stephens was dry and abandoned at 1,417 feet. Magnolia Petroleum Co.'s No. 18 Morris was dry and abandoned at 3,745 feet. Location was abandoned for Samuels' No. 1 Pitts. Wise Oil Corp.'s No. 1 Dilrell was a hole full of water at 2,920 feet and was abandoned.

Cooke County

Arco Oil Co.'s No. 1 Stelzer was completed at 1,156-64 feet, making 1,750,000 feet of gas. Operators Trust Co.'s No. 8 Kleiss is pumping 75 bbls. from 1,676-78 feet. Fain & McGaha Oil Corp.'s No. 1 Embry was dry and abandoned at 2,045 feet. Gray and associates' No. 2 Public Park made 125 bbls. initial from 1,607-32 feet. Lynch Stahl and associates' No. 1 fee pumped 17 bbls. of oil and 150 bbls. of salt water from sand at 1,707-22 feet. McElreath & Suggest's No. 1 Harris was dry and abandoned at 1,808 feet. Oil Operators Trust Co.'s No. 2 Koelzer is a 75-bbl. pumper at 1,627-52 feet. Roxana Petroleum Corp.'s No. 4 Walterschied pumped 35 bbls. of oil and 16 bbls. of water from 1,714-27 feet. Stroube & Stroube's No. 3 Koelzer-B is a 110-bbl. pumper at 1,639-40 feet.

Eastland County

Adamson & Bearman's No. 2 Rosenquest was shot with 40 quarts at 1,452-63 feet, total depth 1,482 feet, and is estimated to be a 75-bbl. well. Chestnut & Smith's No. 1 Simmons was plugged and abandoned at 3,575 feet. Panhandle Refining Co.'s No. 2 Webb made 30 bbls. initial at 1,169-87 feet. States Oil Corp.'s No. 2 Sibley is flowing 75 bbls. per hour and making 7,000,000 feet of gas at 3,059-62 feet. Chestnut & Smith's No. 2 Kemp was dry and abandoned at 3,630 feet. Ross Drilling Co.'s No. 1 Barnett had black lime at 2,971 to 3,039 feet, was shot with 178 quarts at 2,979 to 3,039 feet and made 408 bbls. initial. Wentz Oil Corp.'s No. 1 Stubeville was dry and abandoned at 2,505 feet.

Jack County

Bland & Strang's No. 1 Ellis pumped 13 bbls. initial from 457-75 feet. Butler and associates' No. 1 Gillispie was dry and abandoned at 640 feet. Cunnigham and associates' No. 1 Bowen was junked and abandoned at 561 feet. Hawkins & Hester's No. 1 Barry, Jr., was dry and abandoned at 827 feet.

Montague County

Pure Oil Co.'s No. 1 Loy et al is a 10,000,000-foot gas well at 798 to 815 feet. The Texas Company's No. 6 Maddox-B is a 22-bbl. pumper at 868-82 feet.

Shackelford County

Amerada Petroleum Corp.'s No. 4 Davis was dry and abandoned at 2,235 feet. Dingle and associates' No. 1 McLemore was dry and abandoned at 800 feet. Gwinnup and associates' No. 1-69 Green was dry and abandoned at 1,828 feet with a show of gas at 1,623 feet. Milham Corp.'s No. 4 Moore was shot with 60 quarts at 4,300-55 feet and made 50 bbls. initial, total depth 4,382 feet. Location was abandoned for the same company's No. 9 Moore. White Eagle Oil & Refining Co.'s No. 2 Gorsuch made 7 bbls. of oil and 15 bbls. of water on the pump at 1,576-88 feet.

Stephens County

Texas Consolidated Co.'s No. 9 Martin was dry and abandoned at 4,001 feet after a 480-quart shot with 3,270 to 3,535 feet.

Throckmorton County

Humble Oil & Refining Co.'s No. 1 Langford made 120 bbls. initial from 3,920-50 feet, total depth 4,071 feet.

GROSVENOR EXTENSION, FRY POOL, ALREADY HAS NINETEEN PRODUCERS

The new Grosvenor extension of the Fry Pool in Brown County, North Central Texas, has attracted considerable attention lately because it is proving to be a replica of the original Fry Pool discovered in June of 1926 by William V. Lester and associates. It may not be as large as the main pool, but time alone can tell what the size of the developed area will be, and already 19 producing wells have been completed, several of which compare very favorably with those on the Fry, Shore and Lowe leases in the old pool.

One of the best wells in the pool so far has been Roxana Petroleum Corp.'s No. 3 Smith, which started off at the rate of 85 bbls. an hour and actually gauged 1,495 bbls. the first day from sand at 1,316-42 feet, with total depth one foot deeper in shale. The first producing well on Roxana's lease was also good for 621 bbls., and it is probable that practically all of the lease will be good.

The Forest Oil Co. of Fort Worth was responsible for bringing in this extension, or new pool, and is due much credit for the perseverance with which the area was prospected. Its faith in the district has been rewarded with some nice wells, two of which rank among the best completed to date. Its No. 7 Smith, latest completion, flowed 1,495 bbls., and its No. 5 was good for 960 bbls.

Selby Oil Co.'s No. 1 Ellis was another good producer, having made 750 bbls. initial, and several others have been completed for 200 to 400 bbls. initial.

Encouraged by Oil Show

The well which pointed the way to this pool, although not a producer, was the test known as Rosenfield & Campbell's No. 1 Smith, located on the same lease which now has six producers. It was drilled to 1,588 feet in October of 1926 and was abandoned at that depth. But at 1,346-46½ feet it had a small show of oil, and this encouraged the owners to prospect further in the vicinity, even though a sand at 1,351-55 feet carried water.

Rosenfield then went farther north and drilled a test on the Pinkney Davis tract, and this test created considerable excitement early this year when it topped a sand at 1,276 feet and flowed over the mast. However, the sand body proved to be very thin and the best that could be made of this well was a 20-bbl. pumper. In June this well averaged 10 bbls. daily, and in July 5 bbls.

The next attempt of Rosenfield and his associates (Forest Oil Co.) was on the Smith lease, where the first dry hole has been drilled. They numbered this third attempt No. 2 Smith, and it was successful, having been completed in April for 25 bbls. In May the Selby Oil Co. obtained a 40-bbl. well and the

(Continued on Page 158)

Late News from the Fields

GULF COAST

HOUSTON, Tex., Aug. 23.—The Humphreys Petroleum Corp.'s No. 5 Kirby on the east flanks of Barber Hill Dome got an artesian flow at 2,625 feet and is shut down.

The deepest test in the State is the United North & South Oil Co.'s No. 1 Kelly in the Luling Field in Caldwell County, drilling below 7,100 feet in unbroken schist. Edgar B. Davis, president of the company, has ordered drilling continued, despite the scoffing of geologists. Same company's No. 2 Tiller is drilling around 6,585 feet. The United North & South Co. opened the Luling Field five years ago, getting production in the Edwards lime around 2,100 feet. Skeptics said the field would be short lived, but Davis was undaunted, and, after his company had produced several millions dollars worth of oil, it sold its production to the Magnolia Petroleum Co. for approximately $12,100,000. The United North & South Co. reserved production from sands below 3,000 feet.

LOUISIANA

SHREVEPORT, La., Aug. 23.—Haynes Brothers' No. 2 Murray, Section 14-21-15, Trinity horizon test, in the Pine Island Field, Caddo Parish, blew in while drilling at 3,570 feet. Production is estimated at 15,000,000 feet of gas with lots of salt water. The well will be killed and deepened. Benedum Trees Oil Co. extended the Pine Island Trinity production a quarter mile south by its No. 1 Bashara, Section 23-21-15, which was bailed in at a depth of 3,660 feet, flowing 30 bbls. of oil an hour together with salt water and some gas production, since has increased to about 60 bbls. an hour.

Woodley & Collins' No. 1 Matlock, Section 23-23-12, Carterville Field of northern Bossier Parish, tested 6,000,000 feet of gas and a showing of oil estimated at 50 bbls. daily with a testing device in a sand at 3,069-71 feet. The 6⅝-inch casing will be set at 3,060 feet and the well bailed in. This is the first Carterville test showing no salt water.

Lochnager Oil & Gas Co.'s No. 1 Beasly, Section 26-9-6e, Catahoula Parish, which blew out a week ago at a depth of 3,093 feet, was bailed in after 600 feet of 2½-inch liner was set, but only flowed salt water with a showing of gas.

EAST CENTRAL TEXAS

HOUSTON, Tex., Aug. 23.—The Saline Dome prospects in Cherokee and Anderson Counties do not look as promising as they did six months ago and operations are gradually being suspended.

(Continued on Page 155)

Parker and associates' No. 2 Mathews was drilled to 1,682 feet, plugged back to 1,470 feet and completed as a 20-bbl. pumper at 1,463-69 feet.

Wichita County

Empire Gas & Fuel Co.'s No. 2 Kemp & Kempner did 35 bbls. initial at 706-10 feet. Woolfe and associates' No. 3 Cable-Daume made 20 bbls. initial at 1,811-18 feet.

Young County

Panhandle Refining Co.'s No. 11-A Matthews was dry and abandoned at 852 feet. F. P. Rose's No. 1 Casey was dry and abandoned at 920 feet. Ruthada Oil Co.'s No. 6-A Stovall was junked and abandoned at 2,470 feet. E. C. Stovall's No. 1 fee made 780 bbls. of oil and 120 bbls. of water from lime at 4,232-84 feet.

West Texas Completions

Crane County

Pecos Oil Co.'s No. 2 University was shot with 450 quarts at 2,805 to 3,000 feet and made 1,402 bbls. initial, total depth 3,005 feet. Same company's No. 3 University made 1,450 bbls. initial after a 510-quart shot at 2,780 to 2,991 feet, total depth 3,000 feet. Landreth Production Corp.'s No. 10 State land topped the pay at 2,811 feet and bottomed at 3,008 feet. Formation at 2,828 to 3,008 feet was shot with 320 quarts and the well made 270 bbls. Same company's No. 11 topped the pay at 2,825 feet and bottomed at 2,840 feet to make 8,109 bbls. through three flow lines. Magnolia and Hardwick's No. 2 University made 48 bbls. from 2,942 to 2,985 feet. Simms Oil Co. and Atlantic Oil Producing Co.'s No. 6 University-C was good for 1,956 bbls. at 2,805 to 2,930 feet. The well was shot with 270 quarts at 2,848 to 2,930 feet and responded by making 3,385 bbls. initial.

Fisher County

Marland Oil Co. and Zock's No. 1 Lanius was dry and abandoned at 4,367 feet.

Howard County

Magnolia Petroleum Co.'s No. 5 Kelly-Chalk was shot with 40 quarts at 1,245-65 feet and made 17 bbls. initial.

Pecos County

Marland Oil Co. and McMan Oil & Gas Co.'s No. 1 I. G. Yates topped the pay at 1,241 feet and bottomed at 1,315 feet. The well made 2,730 bbls. the first 10 hours and is now flowing 45 bbls. per hour through a three-quarter inch choke. Mid-Kansas Oil & Gas Co. and Transcontinental Oil Co.'s No. 3-B Yates had the pay at 888 to 913 feet and was opened for two hours and flowed through two 3-inch flow lines. The first hour the well made 525 bbls. and the second it made 458 bbls.

Reeves County

Humble Oil & Refining Co.'s No. 1 Kloh-B was dry and abandoned at 3,758 feet.

Taylor County

Halbert and associates' No. 1 Hunt was dry and abandoned at 3,003 feet.

Upton County

The Texas Company's No. 2 J. M. Perry made 1,425 bbls. initial from 1,953-61 feet.

Winkler County

Champlin Drilling Co.'s No. 1 C. W. Cowden was dry and abandoned at 3,505 feet. Pure Oil Co.'s No. 1 Grisham & Hunter topped the gas at 2,835 feet, topped the pay at 2,837 feet and was bottomed at 2,838 feet. The well flowed 735 bbls. the first three hours while open and was then pinched in and made 1,065 bbls. the first 24 hours.

NORTH CENTRAL TEXAS AND WEST TEXAS ESTIMATED PRODUCTION
Week ending August 21, 1927

Ranger district—	Bbls.
Brown County	20,547
Callahan County	4,760
Coleman County	1,238
Comanche County	1,499
Palo Pinto County	501
Ranger	12,398
Shackelford County	6,023
Stephens County	9,140
Total Ranger district	56,106
Wichita Falls district—	
Archer County	25,811
Baylor County	90
Clay County	563
Cooke County	6,167
Jack County	910
Montague County	11,219
Throckmorton County	1,608
Wichita County	29,846
Wilbarger County	12,113
Young County	13,882
Total Wichita Falls district	102,209
Total North Central Texas	158,315
West Texas district—	
Big Lake Field	26,046
Crane County	98,958
Crockett County	1,516
Ector County	*
Garza County	5
Glasscock County	30
Howard County	3,177
Jones County	1,598
Loving County	20
Mitchell County	3,688
Pecos County	5,132
Scurry County	38
Upton County	20,382
Winkler County	2,897
Total West Texas	163,487
Grand total North and West Texas	321,802
Increase	14,712

*Ector County wells shut in for storage.

Panhandle Wildcats Only Bright Spot

Tests in Gray County and Semiwildcat Territory Enliven Dull Week. Production Under 100,000 Bbls.

By James H. Dameron
Staff Correspondent, Texas Panhandle Fields

AMARILLO, Tex., Aug. 22.—Wildcats in Gray County and tests in the semi-wildcat territory were the only bright spots in a dull week of activities in the Panhandle. Production of the field showed another decline that sent it below 100,000 bbls. daily.

St. Clair Petroleum Co.'s No. 1 Crews, NW cor., Section 9, Block 25, H. & G. N. Survey, formerly Amos et al, No. 1 Crews, appears good for 75 bbls., according to reports from the well. It is in wildcat territory and about 9 miles north of Alanreed. Generally, geologists believe the well is south of the granite ridge running northwest and southeast through the Panhandle Field. Friday night while the crew was running casing the well flowed steadily for about an hour. No gauge or estimate was made of its production but the oil being sprayed over the terrain nearby caused much commotion in a prairie dog colony nearby.

The well had 600 feet of oil in the hole at 2,718 to 3,005 feet and was shot at 2,715 to 2,815 feet with 300 quarts. The well made a flow and then bridged. When it was cleaned out it was making around 5 bbls. through cavings. Running the pipe served to agitate the well.

Some opine that probably a part of the granite ridge eroded away and the oil migrating upward found an outlet and migrated into a region south of the ridge. If such was the case and the opening was of sufficient size then a large area thereabouts may prove productive, the same men contend. The well is in rank wildcat territory and scouts estimate it to be good for around 75 bbls. daily. Developments of the well are being closely followed and checked. Should it prove a commercial well it will open a wide territory for exploration.

Eastern Moore County

On the eastern line of Moore County Skelly Oil Co.'s No. 1 Armstrong, SW cor. Freeman Brazemore Survey, made 90 bbls. daily during the past week from 3,179 to 3,213 feet. Drilling has been suspended and the crew is waiting for orders. The well is holding up around 90 bbls. daily and the crude is sweet crude testing 32.3 gravity.

No. 1 Armstrong is near Cadman and Martin's No. 1 Sneed, Section 68, Block 3, Moore County, which is good for around 30 bbls. per day. However, that well is shut in because of the shortage of storage on the lease. It was not learned whether the Skelly Co.'s well will be completed at its present depth or drilled deeper in search of more prolific production.

Wildcats in the more remote districts failed to drill into anything bordering on production. The Humble Oil & Refining Co. is moving in a rig for a test in Section 117, Block A, Parmer County. Big Bend Oil Co.'s No. 1 Mrs. Ledrick and Sons, Section 7, Block 5-A, the deepest drilling test in the Panhandle, is below 5,000 feet. In Hartley County 6-inch casing was run to cut off salt water at 3,653-75 feet in Deep Rock Oil Co.'s No. 1 Lymann and Balfour, Section 9. Drilling, however, was being delayed by a breakdown that caused a shutdown a few minutes after the tools had been run in the hole.

Shallow Showing

The shallow showing in Donnell Petroleum Co.'s No. 1 Mullican, Section 21, Block B, R. M. Thompson Survey, encountered at 407-14 feet, and estimated good for 3 to 5 bbls. daily, prompted the spudding of the second test in that area some time ago. The test, No. 2 Mullican, is expected to reach the grass roots horizon sometime this week and prove the worth of the shallow find in No. 1. Last reports from the well were to the effect it was drilling below 350 feet.

Twelve-inch casing was carried to 300 feet then a string of 8¼-inch pipe was set at that depth. The test had a small gas show and a light rainbow of oil at 232-36 feet, according to officials of the operating company. The showing was found in a coarse brown sand found underneath a hard pink formation. No. 2 is checking about 2 feet higher than No. 1. No. 1 Mullican will not be given a thorough test until after the completion of No. 2. As soon as the latter well is completed the tools will be moved to No. 1 to complete it. The Donnell company has approximately 1,460 acres surrounding the two tests. The tests are in Hale County and about 11 miles west of Hale Center.

South Plains Area

The South Plains area continues to be an attractive place to wildcatters. Many major operating companies have worked that area with geophysical instruments and have bought acreage on the findings of their tests. Considerable drilling to around 1,500 feet and deeper depths has been planned and there is a healthy drilling campaign now under way in the several counties.

Roy A. Westbrook, Fort Worth, has assembled a 10,000-acre block in west central Randall County and plans to drill a 3,500-foot test there. It is planned to start the test in September and the tentative location of the test in in Section 46, Block B-5, H. & G. N. Survey.

Production in the Panhandle for the first time in months fell below 100,000 bbls. daily. Numerous wells in the proven territories are shut down for pipe line connections and could probably halt the steady decline of the field if they were brought in. The Gulf-Saunders area in Gray County, which was expected to put considerable flush production to the credit of Panhandle, failed to perform as the discovery well indicated it would.

The failure of the Gulf-Saunders area coupled with the shutting down of wells on the sand and the curtailment of drilling, has kept considerable crude off the market and relieved a storage situation in Panhandle. While there is more than 4,000,000 bbls. of room in steel storage in the field some producers and companies are seriously cramped for storage. Additional storage is being built in the field at present. The present storage capacity is above 28,000,000 bbls.

While field operations have dropped sharply during the past months the number of wells shut down in Hutchinson County exceeds those in various stages of drilling. At the end of the week there were 39 wells shut down and 30 drilling. Gray County is more active with 39 wells drilling and only 8 shut down.

Crude Into Storage

Despite the curtailment of drilling and the drop in production crude is still going into storage. It was estimated that around 3,000 bbls. went to storage daily during the past week.

Production during the past week declined 3,115 bbls. daily. Most of the loss was traced to Hutchinson County production, because old wells are not being produced at their maximum and because of the number of wells shut down for pipe line connections. Crude purchasers are not actively soliciting Hutchinson County connections and many are being refused. The Prairie company's storage is practically full and that company is building five 55,000-bbl. steel tanks at Kingsmill.

Production by counties follows:

Carson	9,295
Gray	9,530
Hutchinson	78,210
Moore	50
Potter	30
Wheeler	1,580
Total	98,695
Total last week	101,810
Decrease	3,115

Only one well performed sensationally in the proven areas. That was Roxana Petroleum Corp.'s No. 1 Ellis Cockrell, Section 3, Block B-3, D. S. & E. Survey, southeastern Hutchinson County. The well blew wild for almost a week from 2,860 feet, making a large volume of gas and flowing around 600 bbls. daily into a trap. It is making better than 50 bbls. per hour and gauged 1,590 bbls. the first 24 hours. While running wild the 40,000,000 feet of gas blowing the oil taxed the ingenuity of the rig crews.

Gulf-Saunders Area

The west offset to the Gulf Production Co.'s No. 1 Saunders, Section 40, Block 3, I. & G. N. Survey, Gray County, which opened the Gulf-Saunders area, failed to respond with big production after a shot. Apparently the Gulf Co.'s No. 1 will be the only large well in the area. No. 2 Saunders, the west offset, was shot with 420 quarts at 2,979 to 3,145 feet and bridged. When the bridge was knocked out the well made 40 bbls. the first hour and 490 bbls. the first 24 hours. The oil is 39.4 gravity crude. No. 1 Saunders, now several monhs old and which came in for better than 3,000 bbls. is now making 500 bbls. daily. None of the several wells completed in that area has been better than a few barrels, initial.

On the east side of that activity The Texas Company completed a 122-bbl. well last week. Roxana Petroleum Corp. is experimenting with gas lift in the Gulf-Saunders area. That company's No. 2 Worley, Section 39, Block 3, came in making 450 bbls. but settled to 50 bbls. The first day after being on gas lift the well made 190 bbls.

Gas Trunk Lines

Progress on the two gas trunk lines being built out of Panhandle is reported. West Texas Gas Co. is testing part of its line into the South Plains area and the construction is far ahead of schedule. Empire Gas & Fuel Co.'s line north is being built at a rapid rate. Phillips Petroleum Co. employes are reported to be buying right of way for the Oklahoma Natural Gas Co.'s Panhandle-Oklahoma line.

Four new locations were reported for the Panhandle last week. In Wheeler County a rig is on the ground for Piney Oil Co.'s No. 1 M. E. Ackley, C NW NW, Section 20, Block 24, H. & G. N. Survey. Hatcher and associates' No. 1 fee, C NE SW, Section 80, Block 23, H. & G. N. is a location. In Bailey County Humble Oil & Refining Co. is moving in a rig for No. 1 W. H. Fuqua, C E half, Section 117, Block A, M. B. & B. Survey. In Carson County Empire Gas & Fuel Co.'s No. 1 Burnett estate A, 330 feet from the east line and 330 feet from the south line of the east 160 acres of

(Continued on Page 147)

WILDCAT OPERATIONS IN PANHANDLE

Week Ending August 20, 1927

Company, Well, Farm Name, Section and Block—	Remarks—
ARMSTRONG COUNTY	
Meadows et al's No. 1 E. D. Harrell, C Sec. 160, Blk. A-6, A. & G. Sur.	Salt, 2,700 ft.
United Oil & Trust Co.'s No. 1 J. P. Rock, Sec. 162, Blk. 4, H. & G. N. Sur.	Spudded and temp. abd., 298 ft.
BRISCOE COUNTY	
C. S. Rice's No. 1 J. C. Anderson, SE cor. NW NW, Sec. 22, Blk. B-3, B. S. & F. Sur.	S.D., 1,620 ft.
CARSON COUNTY	
Amatex Dev. Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 3-Y.	S.R., 2,110 ft.
W. A. Gamble's No. 1-A John Dies, 30 ft N of cen., Lot 7, Blk. 11, Panhandle Townsite, Sec. 69, Blk. 2, T. T. R. R. Sur.	S.D., 1,340 ft.
Marland Oil Co.'s No. 1 Burnett-J. C. NE NE, Sec. 121, Blk. 5	Small spray oil, 3,072-3,130 ft; salt water, 3,140-45 ft; dry granite wash, 3,245-88 ft; dry at 3,727 ft; to P.B. for gas.
Marston Oil Co.'s No. 1 J. L. Noel	Pulling 6-in., 3,064 ft.
Navajo Oil Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 3-Y.	Set 6-in. 2,496 ft., drlg. 2,525 ft.
Stubblefield et al's No. 1 E. Cooper, SW cor. NE Sec. 5, Blk 9, I. & G. N. Sur.	Fish., 2,325 ft.
Vitek Oil Co.'s No. 1 J. H. Eller, NE cor. NW Sec. 360, Blk. 3	S.D., 720 ft.
CASTRO COUNTY	
Colorado O. & R. Co.'s No. 1 M. Siemmons, SW cor. Sec. 73, Blk M-17, B. S. & F. Sur.	Rig blown down.
Mystery Oil Co.'s No. 1 J. L. Crum, SE cor. NE Sec. 333, Blk. M-6, S. K. & K. Sur.	S.D., 510 ft. for casing.
CHILDRESS COUNTY	
Brookins et al's No. 1 Mrs. Givens, 600 ft N and W of SE cor. Sec. 676, W. & M. W. Sur.	Spudded and S.D.
Continental Oil Co. & Marland Oil Co.'s No. 1 B. P. Smith, Cen. NE, Section 14, Blk. 9	Drlg. broken shale 400 ft.
Hoover & Calloway's No. 1 O. L. Tucker, Sec. 736, Haggard Sur.	Spudded and S.D.
C. L. Sloane et al's No. 1 B. P. Smith, Sur. 49, P. F. Knott lands	Running 6-in. pipe to 2,840 ft.
COLLINGSWORTH COUNTY	
Harmon & Deems' No. 1 Wilson (Scott), Sec. 44, Blk. 21.	Loc.; temp. abd.
COTTLE COUNTY	
Exploration Co.'s No. 1 Richards	Spudded and S.D.
Sun Oil Co.'s No. 1 Tom Burnett, C NW SE, Sec. 6, Blk. L, S. P. R. R. Sur.	S.D., 2,590 ft. for orders.
DALLAM COUNTY	
James et al's No. 1 fee, Sec. 9, 47½	T.D., 2,865 ft; S.D.
Wood Bros. et al's No. 1 Capitol Synd., Sec. 19, Blk. 17.	6-in. 3,375 ft; S.D., 3,504 ft; S.L.M.
Marland Oil Co.'s No. 1 A. M. James, C SW W half, Sec. 21, S. H. McElreath Sur.	Rigging.
Marland Oil Co. et al's No. 1 Capitol Synd., Sec. 36 Blk. 18, Capitol Synd. land	Drlg., 1,830 ft.
DEAF SMITH COUNTY	
Julien & DeGrace's No. 1 Mrs. R. A. Hindley, Sec. 47, Blk. K-8	S.D., 520 ft.
Red Hill Oil Corp.'s No. 1 Barrett, Sec. 93, Blk. K-4.	S.D., 710 ft.
DONLEY COUNTY	
A. T. Drlg. Co.'s No. 1 F. E. Harington, Sec. 39, Blk. 3-C	1,200 ft. water, 2,115-22 ft; show gas, 3,140-60 ft; dry granite wash, 3,260-92 ft; S.D., 3,498 ft. for water.
DICKENS COUNTY	
Bowser Mickels et al's No. 1 Pitchford ranch, Sec. 1, Blk. 1, Sam Lazarus Sur.	S.D., 3,355 ft; cor. depth; T.A.

(Continued on Page 106)

DUNN TOOLAGRAM

The DUNN Super-Safety TUBING STOP

Insures and will INCREASE Your Production!

The outstanding difference between the Dunn Super-Safety Tubing Stop and all other appliances produced for similar purposes, is its absolute safe dependability. Its action is not dependent upon the functioning of a coil spring. It cannot fail under any condition of service when properly installed.

The slips cannot be telescoped, a hazard that is possible with all other types of tubing catchers, and which causes much damage and expensive fishing jobs.

The Dunn Super-Safety Tubing Stop may be run in the hole as rapidly as desired without setting, thereby reducing off-production time to a minimum. In tests with other types of tubing catchers the Dunn has shown savings of over five hours on a single run in wells averaging 4000 feet in depth.

OIL WELL DUNN TOOLS
TRADE MARK REG.

DUNN
MANUFACTURING COMPANY
OXNARD, CALIFORNIA
Mid-Continent Branch Warehouse
215 East Archer St. Tulsa, Oklahoma
Export Sales Office
150 Broadway, New York City

DUNN SAFETY *means* DONE SAFELY

Seminole Holds Around 445,000 Bbls.

Little River Discovery Well Still on Decline. Water Encroachment at Earlsboro Increasing. Slick Well Doubtful

By J. L. Dwyer
Staff Correspondent, Oklahoma Fields

With varying reports of the effect of proration in the Greater Seminole area, the controlled output of the field hovers around 445,000 bbls., including the Little River well. It is now estimated that about 35,000 bbls. of daily production is held in check, and that the entire Seminole area is capable of producing 480,000 bbls. In the Bowlegs district particularly, there is much difficulty about handling the matter of proration owing to the heavy activity, and the fact that natural flow wells show a rapid decline. One company operating in this area had a figure of permitted production placed upon its output last week, and before the end of the week, it had a hard time to maintain this amount of oil.

It is going to be necessary to take complete gauges of the various pools at frequent intervals in order to fully determine just how much oil can be produced, and then a 10 per cent proration may be applied. This will in all probability be done again this week, and a lower figure of permitted production will be in evidence in the field. The majority of the oil companies in Seminole have displayed good faith in abiding by the rulings of the umpire although some were slow to place their proration into effect.

The daily pipe line and tank car shipments out of the field continue at the normal rate and about 600,000 bbls. of oil is being placed in steel storage each week in the Greater Seminole area.

On Friday morning of last week the field made 443,879 bbls, and on Saturday the figure was slightly different, and by pools showed:

Bowlegs	166,981
Little River	8,129
Earlsboro	162,190
Seminole	76,150
Searight	30,737
Total from 696 wells	444,187

Little River Declining

It will be observed that the Little River well of the Indian Territory Illuminating Oil Co. is registering a slight decline and is holding at 8,100 bbls. The quantity of water which this well is producing is also unchanged and is reported at 5 per cent with a back pressure of 35 pounds on the well. There are now six tests around this producer which should penetrate the sand within the next two weeks, and at that time a much better idea of the possibilities of the Little River region will be possible. The future of this pool holds much significance for the crude price structure.

At least one operation managed to crowd the Seminole Field off the front pages for a few days, and that was the wildcat test of T. B. Slick in Secion 1-6-6, 6 miles south of Little River. This well has unquestionably been the most interesting wildcat operation for the past 10 days, and has brought forth more interest than some of the regions closer to production.

The Slick well has now reached a total depth of 3,966 feet in the Simpson sand which is right on top of the Wilcox formation, and it has about two bailers of water every four or five hours. The progress of the well has been observed carefully, and has been the subject of much speculation, for if it becomes a well there is another area to reckon with. While it was running high based upon measurements taken around the 3,700-foot level, the thickening of formations below this depth has served to dampen the enthusiasm of the test's prospects, and the majority of geologists now are inclined to believe that it is located on the uplift of the formations towards the Arbuckle Mountains, and that its position is decidedly unfavorable to the accumulation of petroleum.

The fate of the Slick well will determine whether the acreage to the south of it is to have a good play or to be condemned, for should it prove to be barren, there will be little interest in leases and lands to the south. The well log shows the following records:

Sylvan shale	3,708 feet
Viola lime	3,808 feet
Simpson sand	3,924 feet

Based upon the Sylvan measurements the well was running 225 feet high. When 100 feet of Sylvan was found it occasioned much surprise, and with 42 feet of Simpson sand already uncovered, the prospects of the well have been dimmed.

The intrusion of water in the north end of the Earlsboro Field has now become quite general and during the past week three good wells have stopped flowing owing to water. There are now 45 wells at Earlsboro making over 4 per cent water, and it is thought that the north limits of the pool will do little to bolster the output. There is one sector of Earlsboro, however, which may yield wells of good output, and that is the region immediately north of the Magnolia Petroleum Co.'s Holmsley lease, which opened the east side of the pool. There is ample room for 25 or 30 wells to be completed in this vicinity, and the presence of a geological high in the region makes the area look more promising.

The comparatively shallow depth of the drilling operations in this territory will eliminate any immediate trouble, for the Twin State Oil Co.'s Sango well in Section 2-9-5, which was responsible for the extension of the northeast side of the pool, is only a few weeks old and little time for drilling has been afforded. It will probably be 60 days before any large production will be developed in this part of the pool.

Seminole Completions

Late completions in the Seminole area include: Gypsy Oil Co.'s No. 6 Peter, SW cor. NW SW Section 10-9-5, Wilcox sand, 4,320-31 feet, 1,167 bbls. the first 18 hours; Pure Oil Co.'s No. 6 Strothers, NE cor. SE SW Section 11-8-6, Wilcox, 4,181-95 feet, 6,336 bbls first 24 hours; Barnsdall Oil Co.'s No. 1 Brown, NE cor. NW Section 10-9-5, Wilcox sand, 4,254-66 feet, 4,445 bbls. the first 24 hours; H. F. Wilcox Oil & Gas Co.'s No. 3 Chupco, NW cor. NE Section 4-9-6, swabbed 160 bbls. from Hunton lime, 4,107-45 feet and is drilling on to Wilcox sand.

In the Pierson Pool of Pottawatomie County, the Carter Oil Co.'s No. 1 Davis, SW cor. SE SE Section 19-7-4, had Hunton at 3,773-3,800 feet, and made 286 bbls. the first 18 hours; Pierce Petroleum Co.'s No. 1 Ward, NE cor. SW Section 30-7-4, is a failure in the Wilcox said, 4,490-95 feet, with a hole full of water. Magnolia Petroleum Co.'s No. 1 Cherry, SE cor. SW Section 13-7-4, is shut in as a gas well in the Hunton lime, with 5,000,000 feet of gas from 3,640-50 feet; No. 1 Banta, NW cor. NE SE Section 14-7-4, has 1,500 feet of oil in the hole from Hunton, 3,679-3,736 feet.

The Pierson Pool has a good production from the Hunton lime, but it is now thought that the Wilcox will not be found productive in this region. The thickening of the Hunton formation is believed to be indicative of good possibilities in that stratum, but the Wilcox prospects in the area are not very encouraging.

In the Garber Field of Garfield County, the Marland Oil Co.'s No. 1 Whipple, NE

(Continued on Page 102)

SEMINOLE STORAGE

The amount of oil in storage and the steel tankage standing, and under construction, in the Greater Seminole area follows:

Company and Location—	No.	Size	Stock	Room	Future
Amerada, 7-9-6	21	55s	856,213	277,787	5 locations for 55s
Amerada, 3-8-6	5	55s	185,734	84,266	3 grades for 55s
Barnsdall, 18-9-6	10	80s	644,206	140,794	
Barnsdall, 24-9-6	2	55s			5 grades for 80s
	2	80s	182,231	82,769	2 locations for 80s
Barnsdall, 34-9-6	1	55	14,459	39,541	
Barnsdall, 15-9-5	1	55	54,377	.....	
Carter Oil, 3-9-6	3	55s	162,591	.....	
Carter Oil, 34-9-6	19	55s	930,455	89,545	
Carter Oil, 35-9-6	5	55s	263,525	6,475	
Continental, 2-9-6					One 55 building
					One 80 building
Cosden Oil, 34-10-6	1	55	53,917	83	
Cosden Oil, 14-9-6	3	55s	99,320	62,680	
Crosbie, 9-9-5	3	55s			
Crosbie, 8-9-5	2	55s	217,180	52,820	One 55 building
Empire, 18-9-7	4	80s			2 locations for 55s
Empire, 7-8-7	2	80s	380,079	90,921	
Empire, 14-8-6	2	80s	152,778	4,222	
Gypsy Oil, 10-9-5	6	55s	320,837	3,163	
Independent, 25-9-6	2	55s	32,600	75,400	
Independent, 8-9-5	2	55s	93,075	14,925	One 55 building
Independent, 16-9-5	5	55s	19,835	250,165	
I. T. I. O., 3-8-6	4	80s			
	1	55	.....	368,000	
I. T. I. O. (Davis), 13-8-6	2	55s			
	5	80s	172,000	328,500	
I. T. I. O. (Day), 13-8-6					
I.T.I.O. (Livingston), 15-8-6	4	55s			
I.T.I.O. (Goforth), 15-8-6	2	80s	93,531	279,469	
I.T.I.O. (Billington), 22-8-6	11	80s	642,503	220,997	
I.T.I.O. (Lawyer), 26-8-6	5	80s	348,075	44,425	
I.T.I.O. (Mills), 31-9-7	14	80s	707,570	391,430	
I.T.I.O. (Hollis), 29-9-7	6	80s	474,327	.....	Four 80s building
I.T.I.O. (James), 24-9-6	4	55s			6 grades for 80s
	3	80s	387,424	64,076	
I.T.I.O. (Bowlegs), 26-9-6	2	55s	75,656	32,344	
Magnolia, 27-8-5					
Magnolia, 22-8-5	34	55s	1,478,292	357,708	Two 55s building
McCullough, 22-8-6	1	80	..	78,500	4 grades for 55s
Phillips, 9-9-5	1	55	52,500	1,500	
Phillips, 3-9-4	2	80s	43,000	114,000	
Phillips, 27-9-6	1	55	..	54,000	
Pure Oil, 26-9-6	2	55s	108,625		
Pure Oil, 28-9-6	25	55s	667,588	682,412	
Prairie O. & G., 22-9-5	9	55s	430,496	55,504	Four 55s building
					2 grades for 55s
Prairie O. & G., 27-9-6	4	55s	215,652	348	
Prairie O. & G., 31-9-7					4 grades for 80s
					12 locations, 80s
Prairie O. & G., 5-8-7					3 grades for 80s
					6 locations for 80s
Prairie O. & G., 33-10-6	5	55s	430,500	1,500	
Roxana, 22-9-6	1	80	42,000	36,500	
Shaffer, 36-9-6	2	80s	.....	157,000	
T. B. Slick, 6-8-7	2	55s			
T. B. Slick, 6-8-7	16	80s	743,571	620,409	
Superior, 32-9-6	2	55s	105,182	2,818	6 locations for 55s
Twin State, 33-10-6	2	55s	.....	108,000	
Texas, 3-8-6	1	55	.....	54,000	
Texas, 14-9-6					One 55 building
Texas, 25-9-6	1	55	.....	54,000	
Tidal Ref., 26-9-6	3	80s	99,566	135,934	
Tidal Ref., 9-9-5	2	55s	35,186	72,814	One 55 building
					2 grades for 80s
Tidal Ref., 15-9-5	1	80	.....	78,500	
Turman, 3-8-6	1	80	77,500	1,000	
Turman, 34-9-6	5	55s	46,742	223,258	
Total			12,146,918	5,894,502	
Total stock last week			11,538,228		
Increase in stock			608,690		

Recapitulation

Company—	Stock
Amerada	1,041,947
Barnsdall	895,273
Carter Oil	1,362,571
Cosden Oil	153,237
Crosbie	217,180
Empire	532,857
Gypsy Oil	320,837
Independent	145,510
I. T. I. O.	2,901,086
Magnolia	1,478,292
Phillips	95,500
Pure Oil	776,213
Prairie O. & G.	1,076,648
Roxana	42,000
T. B. Slick	743,591
Superior	105,182
Tidal Ref.	134,752
Turman	124,242
Total	12,146,918

Present Storage

Capacity:	193	55s	10,422,000
	97	80s	7,614,500
Total capacity			18,036,500
Stock		12,146,918	
Less excess		4,920	12,141,998
Present net room			5,894,502

Future Storage

	55s	80s
Building	11	5
Grades	9	19
Locations	13	20
	33	44
Capacity	1,782,000	3,454,000
Total estimated capacity		5,236,000

The views of Senator Wm. E. Borah relating to Oil Conservation, as expressed in his speech at Denver, June 28, 1927:

"It is a sound rule that the government shall not undertake to do what the citizen can do equally well or better for himself. But this sound rule the government must disregard when individuals disregard the welfare of the nation or the public weal . . . . If those in charge of our great natural wealth and our utilities do not want government interference or ownership, it is largely in their hands not to have it."

Universal Oil Products Company
Owner of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

Gas Blowouts in Louisiana Wildcats

Interest in Catahoula and Franklin Parish Wells. Deep Gasser in Cotton Valley. Two Irma Pool Producers

By Neil Williams
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Aug. 22.—Gas blowouts in two rank wildcat tests, both in Louisiana, a deep gas well in the Cotton Valley Field, and two more good producers in the Irma Pool of Nevada County, Arkansas, served to break to some extent the otherwise routine operations and completions of the Arkansas - North Louisiana division the past week.

The two blowouts, Lochnager Oil & Gas Co.'s No. 1 Beasley, Section 26-9-6e, Catahoula Parish, and Cowell and associates' (Pittsburgh Exploration Co.) No. 2 Moore, Section 12-11-6e, Franklin Parish, both about the same time early in the week, caused a rush of oil scouts and operators to those tests in view of the possible opening of two new gas fields.

The former blew in unexpectedly at a depth of 3,093 feet, while the 3½-inch plug was being drilled out, producing at an estimated rate of 30,000,000 feet of gas daily. However, the test proved as disappointing as first reports has been sensational, and after blowing for a half hour it bridged over and the hole filled with salt water.

At first the operators figured on abandoning the hole and drilling a new test, but later they cleaned it out and cemented a string of 2½-inch casing inside the 3½-inch pipe with a lead seal and one joint perforated on the bottom in another attempt to make a well. The test was to have been bailed in again late Saturday.

This is the test which blew out last February, but which, after being killed and having 4½-inch casing cemented at 2,686 feet, was forced to suspend operations because of floods. Early this month the plug was drilled out and the test bailed, showing only salt water at 2,700 feet. The hole then was reamed on down and a string of 3½-inch pipe cemented at 3,093 feet.

The location of the test is in what is known as Sicily Island, the highest point for miles around. It has been looked upon favorably by many operators as possible oil or gas territory.

The Franklin Parish wildcat blew out while drilling at a depth of 1,385 feet, although the blowout was reported from a sand at 701-34 feet. It started blowing at an estimated rate of 10,000,000 to 15,000,000 feet of gas and from 10,000 to 15,000 bbls. of salt water, and, with no casing in the hole except the 15½-inch surface string at 120 feet, was uncontrollable. However, after the hole had started to crater and the derrick had fallen down, the test bridged over.

Big Cotton Valley Gasser

One of the most important completions during the week was Ohio Oil Co.'s No. 4 Bank of Cotton Valley, Section 22-21-10. It is the biggest gas well yet brought in from the deep Trinity horizon in the Cotton Valley Field, flowing 7,808,000 feet of gas daily with a rock pressure of 1,775 pounds. The test originally was bailed at a depth of 4,576 feet, where it tested dry, but when deepened to 4,595 feet it blew in.

This gas, when run through the Ohio Oil Co.'s gasoline plant in the Cotton Valley Field, increased the output of the plant by 4,000 gallons. This is the equivalent of approximately 500 gallons of gasoline to the million feet of gas, which is an excellent percentage of richness.

Two new wells in the Irma district of Nevada County, Arkansas, added 325 bbls. new production to the division. At the rate this district has been bringing in new wells it is probable that all of Section 6-14-20 and Section 1-14-21 is to be productive of wells ranging in initial flow of 100 to 250 bbls. A steady string of these kind of wells the past few months has focused considerable attention on this pool.

Other completions in the division the past week, with the exception of Dixie Oil Co.'s No. B-5 Files & Mabry, Section 14-21-15, Pine Island deep producer, previously reported, were of little importance. In addition to this well, which was bailed in making 600 bbls. of oil, 1,000 bbls. of salt water and 10,000,000 feet of gas, Caddo Parish got only a 4-bbl. pumper; the Smackover Field of Arkansas two small wells; Sabine Parish, a 37-bbl. well; the Urania Field of LaSalle Parish, a 90-bbl. pumper; while a semiwildcat in LaSalle Parish pumped 1 bbl. of oil with about 15 bbls. of salt water. The Smackover Field also got two gassers, and Richland Parish one. The remainder of the 19 completions were abandonments.

Pine Island Area

Except for the Dixie Oil Co.'s new well, there were no important developments in the Pine Island Trinity horizon operations, but drilling continued active there. Arkansas Natural Gas Co. is attempting to make a gas well of its No. 2 Lane, Section 13-21-15, which is somewhat east of the center of activity. Operators now are watching Benedum & Trees Oil Co.'s No. 1 Bashara, Section 23, which is to the south of the other wells. The 5⅞-inch casing has been cemented at the pay level at 3,635 feet, preparatory to drilling in and bailing. By cementing the 5⅞-inch casing, efforts have been made to ease off the deep gas flow of the field, which operators claim they had in this test at 3,562 feet.

Due to the falling off of Pine Island deep wells and to the continued steady decline in the output of the Smackover heavy oil, production in the North Louisiana-Arkansas division reflected a sharp decrease the past week, amounting to 6,090 bbls. in the daily average. Production by fields was:

NORTH LOUISIANA	
Caddo light	17,780
Caddo heavy	5,145
Homer	4,750
Haynesville	7,215
De Soto-Red River	4,030
Elm Grove	655
Bellevue	1,155
Cotton Valley	5,380
Urania	9,600
Pleasant Hill	820
Total	56,530
ARKANSAS	
El Dorado	5,800
Lisbon	3,300
Smackover light	10,450
Smackover heavy	81,205
Stephens	1,275
Nevada	2,385
Bradley	125
Total	104,540
Total both states	161,070
Total last week	167,160
Decrease	6,090

NORTH LOUISIANA

Bossier Parish

Humble Oil & Refining Co.'s No. 30 Bliss & Wetherbee, Section 15-19-11, Bellevue deep test, is drilling hard sand at 3,844 feet. Palmer Corp.'s deep Elm Grove test, No. 4 Bossier, Section 9-16-11, is drilling lime and shale at 5,116 feet.

Caddo Parish

The Pine Island Trinity horizon is due for some interesting developments in the next few weeks with many tests on or nearing the producing horizon. Arkansas Natural Gas Co. is bailing to test No. 2 Lane, Section 13-21-15, which is at a total depth of 3,623 feet. Benedum-Trees Oil Co. is drilling hard lime at 3,584 feet in No. 1 Bashara, Section 23. The latter company's second deep test on this lease is down 1,530 feet. This company also has another test drilling in lime at 3,261 feet on the Huckaby land in Section 14.

Dixie Oil Co.'s No. 89 Dillon, Section 14, has reached the anhydrite and is drilling at 2,592 feet with 10-inch casing set at 2,391 feet. On this same lease, Dixie is rigging up for No. 90. Dixie Oil Co.'s No. 5-B Files & Mabry, also this section, was brought back in during the week after being deepened from 3,767 to 3,781 feet. Its production was estimated at 600 bbls. of oil, 1,000 bbls. of salt water and 10,000,000 feet of gas. No. 6-B on this lease is drilling sand rock at 1,980 feet.

Gulf Refining Co.'s Tyson tests in this section also are nearing the pay level. No. 14 is in lime and shale at 3,611 feet and No. 15 is in the same formation at 3,186 feet. Haynes Brothers' No. 2 Murray, Section 14, is drilling at 3,251 feet in hard lime. These operators' No. 1 Spell, Section 15, is down 3,615 feet where coring is under way. The Texas Company's No. 6 Herndon, Section 14, is drilling hard lime rock at 2,945 feet. No. 8 on this lease is in hard lime at 2,966 feet and a new test, No. 9, is being rigged up. The Texas Company also has two deep tests on the Herold farm in this section, No. 9, which is drilling hard lime at 2,300 feet, and No. 10, which is being rigged up. In Section 15, The Texas Company's No. 10 Mabry is drilling hard lime at 2,250 feet, and the No. 19 Raines is in lime at 2,184 feet. Pittsburgh Oil & Development Co. is drilling at 2,437 feet in No. 1 Huckaby, Section 15, and on the Herndon lease has cemented 9-inch casing at 2,338 feet in No. 1. Gulf Refining Co. also has a test in this section, No. 10 Herndon, which is in broken lime at 2,969 feet. Golden Rod Oil Co. has set 15½-inch casing at 220 feet in No. 1-A Hampton, this section.

In Section 23, Dixie Oil Co.'s No. 9 Caddo Mineral Land Co. is down 822 feet with 15½-inch surface casing at 186 feet. Magnolia Petroleum Co.'s No. 1 Robertshaw is in lime rock at 3,156 feet. The Texas Company's No. 49 Caddo Mineral Land Co. is drilling rock and lime at 2,006 feet. A derrick is up already for No. 50 on this lease, and a location has been made for No. 51.

Dixie Oil Co.'s No. 2-A Noel, Section 13, is at a total depth of 3,874 feet where casing is being pulled. This company's No. 10 Slattery, Section 27, is underreaming 4½-inch casing at 4,013 feet. Magnolia Petroleum Co.'s No. 26 Raines, Section 22, is drilling chalk rock at 1,758 feet. Ohio Oil Co. is building a standard rig for its deep test, No. 25 Smith, Section 12, which is at a total depth of 4,603 feet. Palmer Corp.'s deep test, No. 1 Sellington, Section 17-21-14, is drilling at 2,780 feet. This is an old well being deepened.

In the Waskom and Greenwood districts, J. H. Askew's No. 2 Elliott, Section 12-19-16, tested 500,000 feet of gas in sand at 2,307 feet. Belchic & Laskey have a location for No. 1 Sharp, Section 15-18-16. Another test, No. 1 Sharp, Section 3, has been abandoned at 902 feet without a test being made. It cored salt water sand. J. P. Evans and associates' No. 1 Trosper, Section 35, has been abandoned at 919 feet after testing salt water. Greenwood Producing Co. and Lyons' No. 2 Angurs, Section 6-16-16, has been cemented back to 1,020 feet where it had a gas blowout while the casing was being pulled preparatory to abandonment of the test. This test, in wildcat territory, had been drilled to a total depth of 3,064 feet where it tested salt water. Greenwood Producing Co.

(Continued on Page 136)

GAS STRIKES IN WILDCAT TESTS RAISE HOPES OF NEW MAJOR POOL

By Neil Williams

SHREVEPORT, La., Aug. 22.—Gas strikes in two tests, one in Catahoula Parish and the other in Franklin Parish, Louisiana, the past week revived interest in the possibilities of opening new wildcat fields in the North Louisiana-Arkansas division. Many operators have been of the opinion that another major field is to be opened some day somewhere in that district.

However, as the week closed the importance of these tests in view of possible further or other production of gas had not been determined as neither test was producing and under existing conditions it was uncertain whether these tests would make wells.

Lochnager Oil & Gas Co. still is attempting to make a well of its test, No. 1 Beasley, Section 26-9-6e, Catahoula Parish, although the test stopped flowing within a half hour after blowing in, and filled up with salt water. The hole has been cleaned, a short string of 2½-inch casing has been set at 3,093 feet inside the 3½-inch pipe with a lead seal and one joint perforated on the bottom, and the test was to have been bailed in late Saturday.

Cowell and associates' No. 2 Moore, Section 12-11-6e, Franklin Parish, had bridged over and stopped flowing after causing considerable damage because of an uncased hole, except for 15½-inch surface string at 120 feet. While blowing, this test produced at the rate of 10,000,000 to 15,000,000 feet of gas and more than 10,000 bbls. of salt water daily.

Arkansas wildcatting developments were confined to routine drilling operations at scattered tests. At present there is no outstanding wildcat area in that state, although several operations are being watched with a view of opening a new play.

Doern and associates' No. 1 Thomas, Section 10-22-11, Bossier Parish, Louisiana, wildcat has drilled the 4½-inch plug at 3,147 feet and has started bailing. A small show of oil is on the pit. This test has 1 foot of sand at a total depth of 3,147 feet.

NORTH LOUISIANA

Bienville Parish

Edwin J. Forrest has started drilling No. 1 Perritt, Section 11-17-6w, and is down 260 feet. His first string of pipe is at 155 feet.

Bossier Parish

The Carterville area in the northern part of the parish took on new life the past week, with many new operations getting under way. Bahan & Davis have a rig up for No. 2 Mays, Section 22-23-12. Bethany Oil & Gas Co. has a rig up in Section 16 for No. 2 Dodson Hamiter and associates have a derrick for No. 1 on the R. E. Hamiter farm, Section 10-23-13. In the same section, Magnolia Petroleum Co. has started drilling in No. 1 Dodson, and is down 449 feet. This company in Section 23-23-12 has staked a location for No. 1 Rober-

(Continued on Page 139)

The Right Tool

for an

Important Job

You have to hand it to the man or the tool that can complete a job, and do it right the first time. Any tong can screw up pipe but it is the tool that completes the job that counts.

A joint isn't made until it is tight; and it is on the last half turn that TRANSIT Red-Head Tongs show up especially well.

To have the job done right—specify

TRANSIT
Red-Head Tongs

Bulletin 5-E. Tools for Pipe Line Construction on request.

Representatives

FRICK-REID SUPPLY COMPANY
Tulsa, Okla., or any store.

ASSOCIATED SUPPLY COMPANY
Los Angeles, San Francisco, Bakersfield, Fellows

E. L. WILSON HARDWARE CO.
Beaumont, Texas.

NATIONAL TRANSIT
Pump & Machine Co.
Oil City Pa.

DISTRICT OFFICES
NEW YORK PHILADELPHIA PITTSBURGH
CLEVELAND HOUSTON TULSA DENVER

Representatives

THE GLOBE SUPPLY & MACHINERY CO.
New Orleans, La.

F. C. RICHMOND MACHINERY CO.
Salt Lake City, Utah.

MORTON McL. DUKEHART & CO.
Baltimore, Md.

REEVES & SKINNER MACHINERY CO.
St. Louis, Mo.

Seventeen Locations in Dale Field

Caldwell County Area Scene of Much Activity. Serpentine Pay Formation 5 Miles Southeast of Lytton Springs

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Aug. 22—Seventeen locations have been made in the new Dale Field in Caldwell County, a serpentine pay formation field, 5 miles southeast of the Lytton Springs Field and 2 miles east of Dale on the Katy Railroad. Derricks for most of the locations are up and rigs moving in for some. Ten miles of water line is being laid from the springs east of Lockhart and the field will soon be drilling. Magnolia has about completed a small temporary line to the field to take care of the oil from The Texas Company's No. 1 Beatty, the discovery well. A map showing the field and lease ownership was published in The Oil and Gas Journal August 11 on page 113.

The discovery well is on the pump and making about 125 bbls. of 37 gravity oil daily. The Texas Company is interested in eight of the new locations. Five of them are on its own leases south and east of the well. Three are on the Damon survey across the line to the north on a lease which The Texas Company and the Humble Co. own in common. Three are on the Lackey survey due south of the discovery well and the others are on the same lease as the discovery well. The Texas Company owns 55 acres in the lease the well is on. Next to the southwest is a 20-acre lease owned by E. L. Smith, Simms and Wheelock & Collins and the latter company has driven stakes for a row of locations up through the middle of the lease. Next to the southwest is the Sun 75-acre lease and it has a location on it with derrick up and rig moving in. Sun and Empire Gas & Fuel have derrick up and will drill due east of the discovery well in the corner of the Sun lease nearest the discovery well and on the Tally lease.

William F. Morgan, Inc., of San Antonio, has made a deal with Atlantic Producing Co. and has ordered out derricks for two wells on its leases. Murchison Oil Co. has made a deal with Roxana and will drill on its lease in the Kelly survey southwest from the discovery well, and on a lease surrounded by leases of the Humble, Marland, Gulf and Reiter-Foster and incorrectly shown on the map referred to above as belonging to the Humble. It is too early to say how much of a field the Dale pool will make. It is generally agreed that "it could" be a pretty fair-sized pool, comparing it with the Lytton Springs Pool which reached a peak of 15,000 bbls. a day. It seems to be common expectation, however, that it will at least not be any bigger than the Lytton Springs pool.

Week's Completions

Completions the past week in Southwest Texas were none of them out of the ordinary with the possible exception of the Mission Drilling Co's. No. 1 Cage, in the White Point district in San Patricio County north of Corpus Christi, completed in sand at around 2,300 feet and making a big volume of gas at high rock pressure. It is reported as 50,000,000 feet but some of the estimates place it at double that. It was cased with extra heavy German imported casing coming in 30-foot lengths and as heavy as drill stem for fear of the casing collapsing or giving trouble. It is quite an extension of the White Point Field and furthermore is the biggest well that territory has produced. Others have been around 20,000,000 feet. This one has opened up new territory. It has been turned into the Houston Gulf Gas Co. line to Houston.

Jim Hogg County

Magnolia Petroleum Co.'s No. 25 Merchants State Bank, Survey 415, of the Randado Field at 1,238 feet made 90 bbls.

William F. Morgan's No. 1 Hinnant in Share 1, Block 28, of the Henne, Winch & Fariss Field has been abandoned dry at 2,183 feet.

Webb County Completions

Haynes-Barnsley Syndicate's No. 1 de la Garza, Survey 335, Block 22, in the Carolina-Texas gas field at 2,040-51 feet gauged 20,000,000 feet of gas.

Rio Grande Oil Co.'s No. 1 Urbahn, a wildcat in the Santo Tomas tract, has been abandoned at 3,206 feet, dry.

New Locations

Magnolia Petroleum Co.'s No. 26 Merchants State Bank, Survey 415, Randado Field, in Jim Hogg County, has derrick up.

Magnolia Petroleum Co.'s No. 2 C. W. Webster, Survey 684, has derrick up in the Carolina-Texas gas field in Webb County.

Breen-Woodward and others have made location for the No. 1 Dinn in Survey 666 of the Simms Field in Duval County.

Bexar County Completions

Witherspoon Oil Co.'s No. 1 Fecci, SE cor. of lease in the Somerset Field at 1,400 feet is making 2 bbls.

Caldwell County

The Texas Company's No. 1 Beatty, Nich Kelley Survey, in the new Dale Field at 2,324 feet is pumping 50 bbls. daily.

Smith & Allen's No. 1 Branyon, located near United North & South No. 1 Callahan, producing 1 bbl. daily at 2,360 feet, has been plugged and abandoned.

Kleberg County

Humble Oil & Refining Co.'s No. 3 Flato-Clark, Block 9, Section 40, a producing gas well with tools in the hole, was deepened and an attempt made to complete but bottom of test cored dry.

San Patricio County

Mission Drilling Co.'s No. 1 Cage in the Ross and others Survey in White Point gas area at 2,300-2,400 feet gauged 50,000,000 feet of gas and extends field over a mile.

New Locations

Sun Oil Co.'s No. 1 Beatty, Nich Kelly Survey, 150 feet to northeast line of Sun lease in the Dale Field in Caldwell County, is moving on.

Witherspoon Oil Co. is rigging up for special test, 20 feet north of the No. 2 Nixon, the wild gasser in the Adams gas field in Medina County, which has cratered 450 feet from well, in an attempt to mud off sand and stop gas.

Witherspoon Oil Co.'s No. 2 Fecci is location in Somerset Feld, 800 feet northwest of the No. 1, and machinery is moving in.

McCormick & Noack's No. 2 Shelton is location in the William Allen Survey in Milam County, offsetting the No. 1 test.

Merritt Drilling & Development Co.'s No. 1 Screck in the W. T. Townsend Survey, 2 miles from Ellinger in Colorado County, has been spudded in.

Cole Gas Field—Duval

Houston Oil Co.'s No. 1-B Lopez, Surrey 319, Block 4, located 155 feet to northeast and 465 feet to southeast lines, has been spudded in. Newton Drilling Co.'s No. 1 Bruni, Survey 9, located 500 feet to northwest and 150 feet to northeast lines, is drilling at 150 feet. Trussell, Cezeaux & Putman's No. 1 Bruni, Survey 10, located 150 feet to northwest and 450 feet to northeast lines, has derrick up.

Piedras Pintas Dome

Humble Oil & Refining Co.'s No. 7 Walsh, Survey 185, located 2,050 feet to east line and 1,750 feet to north line, is moving on.

Randado Field—Jim Hogg

Magnolia Petroleum Co.'s No. 25 Merchants State Bank, Survey 415, 1,550 feet to north line and 1,300 feet to west line, has sand at 1,237 feet and testing.

Henne, Winch & Fariss

William F. Morgan's No. 1 Hinnat, Las Animas Grant, Block 28, Share 1, at 450 feet to east and 150 feet to south lines, at 2,165-70 feet, had sand and tested dry.

Alworth Pool

Alworth Brothers' No. 14 M. Garza, Survey 39, Block 11, located 90 feet to northwest lines and 660 feet to southwest lines, is moving on.

Albercas Pool—Webb

Magnolia Petroleum Co.'s No. 1 Yeager-Strolman, Block 65, located 150 feet to SW corner, is moving on. O. W. Killam's No. 6 Bruni, Block 34, located 565 feet to west and 150 feet to north lines, is drilling at 1,200 feet.

Aviator Field

Pittman & Moriarty's No. 1 Puig, Block 4, located 500 feet to east line and 850 feet to north line, at 1,694 feet has sand and set casing. Columbia Petroleum Co., Inc.'s No. 17 Puig, Block 57, at 150 feet to NW corner, is location.

Carolina-Texas Gas Field

D. J. Simmons and others' No. 2 Webster, NW NE Survey 684, is location; No. 2 de la Garza, Survey 335, Block 8, is standing at 400 feet. Houston Oil Co.'s No. 2-A Barnsley, Survey 268, Block 12, located 400 feet to north and 350 feet to west lines, is location. Hayes-Barnsley Syndicate's No. 1 de la Garza, Survey 335, Block 22, located 150 feet to SE corner, at 2,040-51 feet, tested 40,000,000 feet, with rock pressure of 750 pounds. T. P. Morgan's No. 2 de la Garza, Survey 335, Block 23, located 400 feet to north line and 350 feet to west line, is moving on.

Cole Gas Field No. 2

Magnolia Petroleum Co.'s No. 1 Benavides, Survey 2234, located 420 feet to south line and 162 feet to west line, is moving on. Cole Petroleum Corp.'s No. 36 Benavides, Survey 412, Block 14, at 159 feet to east line and 266 feet to north line, discovery well of the new field, has resumed drilling and is at 2,560 feet; No. 48 Benavides, Survey 412, Block 5, is located 125 feet to north line and 733 feet to east line, has been spudded in.

Luling Field—Caldwell

Magnolia Petroleum Co.'s No. 1 Laura Rios, John Henry Survey, 150 feet to SW corner, is drilling at 2,088 feet; No. 17 Rios, John Henry Survey, NE corner, has rigged up. North & South's No. 1 Kelly is at 7,085 feet, and the formation is changing from the schist in which the test has been from 4,700 feet; No. 2 Tiller is drilling in schist at 6,575 feet.

Kingsville Field—Kleberg

Houston Oil Co.'s No. 1 Kissman, Block 9, Section 41, is drilling at 1,650 feet, with some sulphur water sands. Humble Oil & Refining Co.'s No. 2 Sexauer, Section 41, Block 11, at 200 feet to south line and 100 feet to east line, has been spudded in; No. 2-B Dennett, Section 38, Block 13, at 150 feet to CSL, is at 2,187 feet, and preparing to core sandy shale; No. 4 Kleberg, Section 40, Block 6, at 660 feet to east line and 810 feet to south line, at 2,430-46 feet,

(Continued on Page 136)

SEISMOGRAPH LOCATION MADE IN SAN PATRICIO COUNTY, TEXAS

By B. D. Stevenson

SAN ANTONIO, Tex., Aug 22.—A seismograph location in San Patricio County near the old town of San Patricio in the western part of the county will be drilled by the National Oil Co. of San Antonio. It is probably the first to be drilled on a seismograph location by an independent company, all the work of that kind heretofore being by majors. The location also is in the midst of the coast territory where there is growing wildcat activity. The well is on the north side of Nueces River and about 25 miles up the river from Corpus Christi and down the river about the same distance from the Cartwright gas field in Live Oak County.

This part of the Southwest Texas country and the territory up through Lavaca, Fayette, Gonzales and adjoining counties are the territories most in the mind of wildcatters at this time. Forty miles north of Corpus Christi is the Refugio gas field where Houston Gulf Gas is down 2,000 feet on a deep test that will go to 4,000 or deeper. Forty miles south of Corpus Christi is the Kingsville Field. Across the Nueces Bay north of Corpus Christi is the White Point gas area and inland 50 miles the Houston Oil Co.'s Cartwright gas field. The National will make a deep test of the well at San Patricio which is on the J. E. Sullivan farm in the J. C. McMullen survey. It is on a block of acreage got up by J. T. Laprade. Houston Oil Co. is drilling in all of the proven areas in this district, Kingsville, White Point, Refugio, and Cartwright Field in Live Oak and has two wildcats drilling in Goliad County where it got a small amount of gas a few months ago on the Pettus ranch.

So far as developments are concerned none of the wildcats in Southwest Texas the past week disclosed anything unusual. Mission Drilling Co., as mentioned elsewhere, in the White Point Field, in a well that might have been classed wildcat, got an extra big gas well.

Duval County

Schlessinger Oil Corp.'s No. 1 Moody, Survey 60, located 330 feet to north line and 1,650 feet to east line, has been spudded in. National Oil Co.'s No. 1 Ball, Survey 16, at 450 feet to north and 150 feet to east line, has derrick up and moving in machinery. Humble-Reiter-Foster's No. 6 Kohler, Survey 400, located 60 feet to west line and 660 feet to south line, has set casing at 2,760 feet.

Hidalgo County

Queen City Oil & Gas Co.'s No. 1 Adams, Block 82, Lot 1, has resumed drilling at 2,043 feet.

Jim Hogg County

Paizano Oil Syndicate's No. 1 Campbell, Las Vivoritas grant, is drilling at 225 feet. Holden and others' No. 3 Jones, Share 27, Block 136, located 330 feet to east line and 440 feet to north line, is drilling at 2,345 feet. Hamilton and others' No. 1 Holbien, Block 44, located 158 feet to south and 363 feet to west line, is standing at 2,220 feet.

Starr County

T. W. Flotz and others' No. 1, Survey 301, located 150 feet to northwest and 2,400 feet to west lines, is ready to spud in. Milham Corp.'s No. 2 Salinas, Porcion 111, is drilling deeper, after testing gas and salt water at 4,389 feet.

Zapata County

Earl K. Bateman's No. 2 Vela, Block 4, located 675 feet to northwest lines and 417 feet to northeast lines, is drilling at 3,180 feet.

Webb County

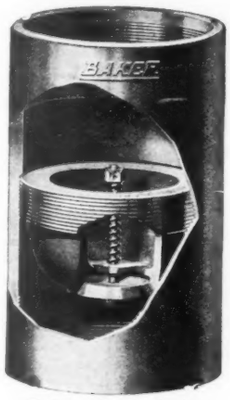
Rio Grande Oil Co.'s No. 1 Urbahn, Santo Tomas tract, 10,000 feet to south line and 20,000 feet to east line, is drill-

(Continued on Page 102)

BAKER

QUALITY

—more than an empty phrase —it is a pledge of the superlative in all-around performance and extraordinary durability



Baker Float Collar

Baker Quality - - - Baker Performance - - - Baker Superiority, are terms to be interpreted in the superlative.

Supporting Baker principles and policies, is the spirit of the Baker organization to so build Baker tools that the Baker pledge of the superlative in quality and performance will never be violated.

But only in "Baker Made" will you find Baker qualities. To be sure to avoid imitations - - - specify "Baker Made" and be safe.

Baker Float Shoe

Baker Float Collar

The Baker Float Collar will set the heaviest, longest string with speed and absolute safety. Relieves your brake bands, wire lines, rig and equipment of excessive strains and prolongs their life. Also useful to cement through. Built as all Baker tools are—of the finest materials and with the finest finish. Foolproof - - - simple in construction.

Baker Float Shoe

The Baker Float Shoe meets the demand for a "floating plug" in a Baker made Plain Casing Shoe, with all the strength and safety of the Baker Float Collar. Those operators who prefer the back-pressure valve at the bottom of the string and still desire the greatest measure of safety will find the Baker Float Shoe to their liking.

The complete line of Baker Oil Country Specialties are described in the various Baker Bulletins which should be in the hands of every superintendent, purchasing agent and executive. Mailed promptly on request.

BAKER CASING SHOE COMPANY

COALINGA, CALIF. TAFT, CALIF.

Box L, Huntington Park, California

Export Sales Office: 25 Broadway, New York City

Mid-Continent Representatives:
B & A SPECIALTY COMPANY

220 East Brady St., Tulsa, Okla.

B & A

708 Keystone Bldg., Houston, Texas

COOPER

Empire Gasoline Company's Lacy, Oklahoma, Plant contains eight of the latest type Cooper 170 Horse-power compressor units.

There has never been a year when old customers have stuck so close to Coopers and there never has been a year when so many new companies have turned to Coopers. The explanation is that the comparative value of Cooper Gas Engines and Compressors has been growing steadily greater.

ENGINE BUILDERS FOR NINETY-FOUR YEARS.

THE C. & G. COOPER COMPANY
Mt. Vernon, Ohio

1111 Magnolia Bldg., Dallas 604 Kennedy Bldg., Tulsa
649 S. Olive St., Los Angeles

ONCE A COMPANY USES COOPERS THEY SELDOM IF EVER CHANGE

Production Slumps Again in Gulf Coast

Operations in That Area Have Slowed Up Considerably. Demand for Coast Crude for Lubricants Not Started Yet

By P. L. McGreal
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Aug. 22.—New production during the past week in the coastal pools totaled 4,790 bbls. of which 3,460 bbls. came from one well at Spindletop. Wells completed during the week totaled 15, of which 7 were dry and 1 a salt water hole. Six tests are bailing.

Stocks of coastal crude in steel and earthen tanks August 1 were 15,549,922 bbls., a decrease of 59,023 bbls. compared with July 1. The stocks of light gravity crudes held at tank farms on the Gulf Coast on the same date were 6,257,759 bbls., or 1,861,330 bbls. less than reported on July 1 last.

These figures reflect the slow demand for coastal crude to be made up into lubricating stocks at this time of the year and no change in either the price condition or statistical situation is expected until colder weather creates a demand for lubricants from coastal crude in the northern markets. The value of Gulf Coast crude lies in its lubricating content with its natural zero cold test.

The estimated daily average gross production for the week of August 20 is placed at 136,233 bbls., which is a decline of 3,911 bbls. compared with last week's estimate.

The Pierce Junction Pool shows the largest decrease—1,400 bbls., no wells of moment having been completed on the new northwest flank in two weeks. Vinton declined 640 bbls. and Hull 405 bbls.

The estimate for each pool is as follows:

Pool—	Daily Av.
Boling	2,015
Batson	1,345
Blue Ridge	3,350
Big Creek	2,830
Barber Hill	900
Dayton	275
Damon Mound	885
Edgerly (La.)	2,200
Goose Creek	8,005
Humble	4,325
Hull	14,725
High Island	145
Jennings (La.)	1,010
Lockport (La.)	5,160
Markham	420
Nash	1,200
Orange	4,960
Orchard	45
Pierce Junction	4,900
Piedras Pintas	95
Spindletop	54,300
Saratoga	1,150
Sour Lake	4,255
South Liberty-South Dayton	2,713
Stark (La.)	520
Vinton (La.)	5,260
Welsh-Anse La Bute (La.)	25
West Columbia	8,250
*Miscellaneous	970
Total	136,233

*Includes Austin, Nacogdoches, Washington and Kleberg Counties, Texas, and Cameron, Calcasieu and Iberia Parishes, Louisiana.

Southwest Fields

The estimated gross production in the southwest fields is placed at 32,560 bbls. for the same period, an increase of 180 bbls. over last week's figures. The gross for each field is as follows:

Filed—	Daily Av.
Luling	17,350
Mirando-Laredo	11,050
Somerset	920
Callihan	20
Rockdale-Minerva	1,020
Lockhart (Lytton Springs)	2,200
Total	32,560
Grand total for week	168,793
Grand total last week	172,524
Net decrease	3,731

Wells Completed

The Nash Pool, where the Rycade Petroleum Co. is operating exclusively, figured in the list of completions this week when No. 15 Wisdom came in making 500 bbls. initial around 3,800 feet. Later in the week the well sanded and is being cleaned out.

The Sun Oil Co.'s No. 3 Price on the south end of the deep production at Spindletop, was completed around 5,200 feet flowing 3,460 bbls. initial output. Its No. 2 McLean was abandoned as a salt water hole at 3,950 feet. The Texas Company made one of the record deep holes there when it abandoned No. 1 Garrick at 6,050 feet. Its significance lies in the fact that it is located one-half mile north of production. The Rio Bravo Oil Co. previously made two attempts to extend the pool in that direction and Barbee and others also failed to do the same. The present deep sand area is on the southwest flank of the old cap rock production, covering approximately 25 acres. It has been defined to the north and the east. The Yount Lee Oil Co. has production on the south and southeast sides of the original pool, but the future development work there will be slow since that company holds all the acreage that is considered within bounds.

The Rycade Petroleum Co.'s No. 14-B State Land on Cow Bayou in the Orange Pool is flowing 250 bbls. of oil and 1,000 bbls. of salt water at 4,200 feet. The Tillery Oil Co.'s No. 3 State Land there is bailing at 3,180 feet.

The Sun Oil Co.-Marrs McLean's joint No. 11 Cade at High Island will make a pumper at 3,450 feet.

The Texas Company finally abandoned No. 23 Arnold in the West Columbia Pool in salt water at 4,425 feet.

The Gulf Production Co.'s No. 11 West Schenck on the south flank of the Blue Ridge Pool is bailing at 3,900 feet.

The Humble Oil & Refining Co. set strainer in No. 3 K. Jackson in the South Lake Pool for a test at 2,160 feet. It is a worked-over hole.

In the Goose Creek Pool, the Gulf Production Co.'s No. 11 Hoffman-Galliard will make a pumping test at 2,750 feet, following a work over. Same company's No. 1 in San Jacinto Bay is bailing, with the strainer set in sand at 4,450 feet.

The Rio Bravo Oil Co. set strainers in Nos. 3-B and 5-B Settegast on the northwest flank at Pierce Junction for tests at 3,450 and 3,375 feet, respectively. The Navarro Oil Co.'s No. 2-A Cain on the east side is preparing to test sand at around 4,800 feet. The location is only 50 feet from Snowden & McSweeney's No. 1 Cain, the discovery well at Pierce Junction, but the sand is 500 feet deeper.

South Louisiana Completions

In the Vinton Pool, the Vinton Petroleum Co.'s No. 7 Rescue was abandoned as a salt water hole at 2,725 feet.

Cline, Smith & Cline's No. 2 Wilson in the Jennings Pool is pumping 30 bbls. at 1,750 feet.

In the Lockport Pool, the Vacuum Oil-Gulf Refining Co.'s No. 6 Farquhar is flowing 1,500 bbls. of fluid, 80 per cent sediment and water, at 4,400 feet.

Four wildcats were plugged and abandoned during the week under review. The Gulf Production Co. quit No. 2 Perry on the south side of the Stratton Ridge Dome in Brazoria County, Texas, after drilling to 3,086 feet.

The Danciger Oil Co. abandoned No. 1 Bowie, Cedar Lane, Matagorda County, at 2,010 feet.

At Hackberry Island Dome in Cameron Parish, Louisiana, the Yount Lee Oil Co. plugged No. 4 in Black Lake. The Calcasieu Oil Co.'s No. 1 Caldwell at Hackberry Island staged a gas blowout while the open hole was being bailed in a sand showing some oil at 4,310 feet. The gas flow was estimated at 20,000,000 feet. The gas ignited and is still burning. The well is on a block of 3,000 acres in a marsh. H. C. Hanzsen of Houston and J. W. Gardiner of Lake Charles, La., are the largest stockholders in the Calcasieu Oil Co.

The Louisiana Land & Exploration Co. abandoned No. 1 in Calcasieu Lake in Calcasieu Parish, near Lake Charles, at 5,225 feet after getting salt water.

Conklin and others' No. 1 Polmykal in the old shallow sand section near Brenham, Washington County, Texas, is pumping 18 bbls. at 191 feet. These are light gravity wells.

Wildcats

Very little interest is being manifested in either the wildcat tests or wells drilling in defined territory at the present time. Few new locations are being made to offset the abandoned wells and an unusually large number of idle drilling crews are to be found at such places as Humble, Sour Lake, Goose Creek and Houston. Field workers who have been following the rotary method of drilling are urged to avoid the Gulf Coast region and not add to the already overcrowded list of unemployed. Contractors have stored their idle rigs or are seeking contracts in other fields in Texas. No person ventures to predict when conditions will improve.

The deepest hole drilling in the coastal region is the Gulf Production Co.'s No. 3 Bordages, off the Fannette Dome, southwest of Beaumont in Jefferson County. It is around 6,300 feet and progress is slow since it takes all day to pull the drill pipe out of the hole, put on a new bit and go back to bottom. Extreme care must be exercised to avoid the drill pipe twisting off and junking the job. The Houston Oil Co.'s No. 2 Fitzhugh, off the Big Hill Dome in the same county, is drilling below 4,055 feet in shale and sand. The South Spindletop Oil & Development Co.'s No. 1 Young, west of Nederland, is below 1,300 feet. The Beaumont Oil & Prospecting Co.'s No. 1 Terrell, 3 miles northwest of Beaumont, is shut down temporarily at 2,495 feet.

Montgomery County

Cordell & Sons and Lynn's No. 1 Nichols, south of Magnolia, Montgomery County, is drilling around 400 feet, having set surface casing. The location is in a section where previously drilled tests have shown gas. One of thes old gassers will be worked over for fuel. Beard and others' No. 1 Beard, 15 miles west of Conroe, is idle at 1,310 feet. Brain and others' No. 2 Fitch, north of Spring, is around 1,800 feet.

Houston County

The Texas Company's No. 1 near Lovelady is drilling around 3,475 feet.

Jasper County

The Jasper Oil & Development Co.'s No. 1 Stone was abandoned at 3,200 feet.

Austin County

Raccoon Bend: Humble Oil & Refining Co. is starting Nos. 1 Gotosky and 1 Sherrod.

Liberty County

North Dayton: Harrison Oil Co.'s No. 2 Quintette is a location. No. 1 is still heading 275 bbls. per day. Titwell and others' No. 1 Gradner, east of Davis Hill Dome, is drilling below 1,400 feet.

Brazoria County

Allen Dome: Roxana Petroleum Co.'s No. 1 Bernard River, deepening at 4,636 feet. No. 4 Allen is drilling at 4,598

(Continued on Page 139)

OXFORD TOWNSITE HAS GOOD START; HAS EIGHTEEN DRILLING OPERATIONS

By J. L. Dwyer
Staff Correspondent, Kansas Fields

The Oxford townsite play in Sumner County is probably the most interesting spot in the Kansas fields at this time. With 850 bbls. daily production from four wells, and about 18 drilling operations in this area, the pool has a good start. Roxana Petroleum Corp. has the majority of the pool's production and seems to be well fortified with leaseholds. Three new locations have been announced in this field, Stanley & Jarvis' No. 1 Scroggins, which is situated between two producing wells; Fitch and others' No. 1 in Block 1 is made; and Trees Oil Co. has a new location in No. 1 Threep in the east side of the city on Block 17.

In Greenwood County, Phillips Petroleum Co. has made a location for an important test between the Seeley and De-Malhourie Pools. It is No. 1 Harris, CNL NE SE Section 19-22-11, where various showings have encouraged activity.

Far to the south and west of present activity, the Barbara Oil Co. (a personal holding of J. K. D. Shaffer) is starting another wildcat well near the spot of a former gas well. The new operation is No. 1 Carter, NE cor. NW Section 2-33-13.

Chase County

Phillips Petroleum Co. made location for No. 3 Lipps, C SE SW, Section 25-18-6. Preston & Pasewalk have the machine on the ground for No. 6 Lipps, C SW NE, Section 36-18-6. Basom and others made location for No. 1 Leedy, NE cor. NW SE, Section 26-22-9.

Butler County

Magnolia Petroleum Co. is building the rig for No. 4 Shriver, NW cor., Section 34-27-6. Blue Stem Oil Co.'s No. 1 Doughty, SW cor. NE SW, Section 5-27-6, made 125 bbls. from sand 2,696-2,732 feet. Phillips Petroleum Co.'s No. 3 Tatum, SE cor. NW, Section 9-27-6, is dry and abandoned at 3,174 feet. Branson and others' No. 1 Houser, SW cor. NE SW, Section 9-29-5, is a dry hole at 3,510 feet.

Chautauqua County

Griffeth, Bell and others' No. 4 Oliver, C NW SW, Section 1-32-10, was completed for 1,500,000 feet of gas in sand 2,008 28 feet.

Coffey County

Balliere and others' No. 1 Talbert, C SW SW, Section 20-21-14, is dry and abandoned at 1,792 feet.

Cowley County

Vickers and Philmack Oil Co. made location for No. 1 Graham, SE cor. NW NW, Section 22-32-4. Roth & Faurot's No. 1 Adams, SE cor. Section 32-33-4, is a rig under construction. Pryor, Lockhart and others are building the rig for No. 1 Gearhart, NE cor. NW SE, Section 7-34-6. The Texas Company's No. 1 Willie, NW cor. NE, Section 18-31-3, is a dry hole at 3,414 feet.

Dickson County

Loy and others made location for No. 1 Sherman, NW cor. SE, Section 24-16-4.

Ellsworth County

Philmack Oil Co. made location for No. 1 Gregory, C SW, Section 24-16-9w.

Greenwood County

Empire Gas & Fuel Co. is building the rig for No. 16 Duby, NW cor. NE NW, Section 23-22-11. Location has been made for No. 2 Demler, NE cor. NW NE, Section 25-22-12. Rogers and others have the rig up for No. 1 Clopton, Block 27, Section 2-26-10. Foster Petroleum Co.

(Continued on Page 139)

VICTAULIC
COUPLINGS
ENCIRCLE THE WORLD

Three South American gathering lines.

Palestine 8" water main in foreground and 6" line on hillside.

Placing Victaulic ring over both ends of pipe. 12" line of the Gulf Pipe Line Co., Panhandle, Texas.

From the oil fields of North America to the farthest outposts of civilization, Victaulic Flexible Leaktight Pipe Couplings have made themselves known. From South America to Palestine—Siberia to the Mid-Continent oil fields of the United States—Victaulic Couplings are recognized as the logical pipe couplings, because they are flexible. They are the most easily installed and the tightest pipe couplings made.

The Victaulic Coupling consists of two half-housings, two bolts and leak-tight ring over the ends of the pipes, joining them together, allowing such clearances as are necessary to obtain great flexibility and expansion. The pressure on the inside lips of the ring press them against the pipe, so that the greater the pressure the tighter the coupling.

For detailed information write today for Victaulic Bulletin No. 2, which will be gladly sent on request.

VICTAULIC COMPANY OF AMERICA
26 Broadway **New York**

Western Distributors

SMITH SEPARATOR
C O M P A N Y

Tulsa Okla.

TEXAS OFFICES:
924 Post Dispatch Bldg.
Houston. Texas
1402 Ft. Worth Nat'l Bank Bldg.
Fort Worth. Texas

LOUISIANA OFFICE:
405 Forest Ave.
Shreveport, La.

CALIFORNIA OFFICE:
2039 East 38th St.
Los Angeles, Calif.

Good Well Reported from New Mexico

Test in Hospah District Said To Be Good for 250 Bbls. Other Operations in Colorado, Wyoming and Utah

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Aug. 20.—Operations in the Rocky Mountain district in the past week resulted in no developments of outstanding importance and were confined mostly to the routine. The Midwest affiliated companies reported three completions in Salt Creek with an aggregate of 1,112 bbls. of new production. The Florence district in Colorado had two completions, one for 20 bbls. and the other for 50 bbls., one being in the west and the other in the south extensions of the old pool. Unconfirmed reports from McKinley County, New Mexico, tell of a 250-bbl. well being completed in the Hospah district which, if proven to be true, means an important extension of the new pool and a considerable thickening of the sand at the location of the new well. The Texas Production Co.'s No. 1 Robinson in Eddy County, New Mexico, gives little evidence of being much more than an encouraging show. The Prairie Oil & Gas Co. is starting a test in southwestern Wyoming which will hook up with the Hiawatha Dome drilling on the Colorado side, and the Ohio Oil Co.'s No. 2 Cross Gas, on the Garland structure in the Big Horn Basin has been shut in as a gas well and another test will be started. The Union Oil Co. of California struck another gas pocket in its Lisbon Dome test in Utah, and two of the Utah wells about to run out of hole will be completed with diamond drills.

Negotiations looking to the drilling of some flank tests on one or more of the Colorado River structures in southeastern Utah, south of Moab, are progressing between the Utah Southern Oil Co. and other interests. It is expected that a deal will be concluded between the Utah Southern and Midwest companies whereby the five rigs and extensive drilling equipment in the field will be turned over to the Utah Southern for further drilling, the Midwest retaining an interest in the operation. Whether the Utah Southern will go it alone in the new campaign, or become affiliated with some other interests, has not been announced, but it is probable that the latter course will be pursued. Utah Southern, in which W. G. Skelly of the Skelly Oil Co. is a director, has heretofore confined itself to the Rocky Mountain district where it has about 80,000 acres in the several states, but it was announced this week that the company will go into the Texas fields. A deal has been closed with the Skelly Oil Co. for a joint test on a 50-50 basis in Reagan County, where 4,600 acres have been blocked up on a new structure, the Skelly Oil Co. to be in charge of the drilling. The geologists are now making the location. The same interests are blocking up two other structures in that area. The first test is expected to be under way by October 1.

Wyoming

Reports from the Wyoming wildcats were very meager this week due to the heavy rains having washed out the bridges and put telephone and mail service out of operation in several districts. Interests identified with the Midwest Refining Co. reported three completions in Salt Creek. Wyoming Oil Fields Co.'s No. 18-A, SE Section 23-40-79, was completed at 1,543 feet with an initial production of 36 bbls. after a shot. Wyoming Associated's No. 21, SE Section 14-40-79, was completed at 1,298 feet and pumped 961 bbls. the first 24 hours without being shot. Wyoming Associated's No 21-L, SW Section 25-40-79, made 125 bbls. initial from the shale above the Lakota at 2,157 feet without being shot.

Buck Creek Oil Co.'s No. 1 Delcahoyde, NE NE Section 25-37-63, Ant Hills Dome in Niobrara County, about 12 to 15 miles northeast of the Lance Creek Field, is at an interesting depth at 3,800 feet. The formations are running about 450 feet higher than the surface geology indicated. Same company's No. 1 Diehlman, NE NE Section 7-35-65, Lance Creek Field, is drilling at 3,240 feet. This is a semi-wildcat, being located to the west and a little south of the nearest producer. Utah Southern Oil Co.'s No. 1 Government, SE NW Section 29-56-97, Garland Dome, Big Horn Basin, is drilling ahead at 1,310 feet with the 10-inch cemented at 1,875 feet. This well is located about three-fourths of a mile northwest of the Ohio Oil Co.'s No. 2 Cross Gas, which had a flow of 40,000,000 feet of gas at 3,163 feet, and which is now standing.

Texas Production Co.'s No. 33 Crary, Section 9-33-76, Big Muddy Field, is working on the 4-inch drill pipe at 3,990 feet. Same company's No. 5 Good, Section 3-26-90, Lost Soldier Field, in Carbon County, is filling a cavity with rock at 2,763 feet. Its No. 8 Keenan, Section 22-6n-3w, Maverick Springs Field, in Fremont County, is drilling in gray lime at 1,545 feet. E. T. Williams Oil Co.'s No. 21-A Middy, SW Section 11-39-79, Salt Creek Field, is waiting for cement to set at 2,503 feet. Utah Oil Refining Co.'s No. 2 State, SE Section 36-43-91, Black Mountain structure, is drilling in gray sandy shale at 1,310 feet. Same company's No. 2 Weller, NE Section 36-43-91, Black Mountain structure, is drilling and bailing at 2,971 feet. Other operations of this company on Black Mountain are No. 1 Avery, NW Section 5-42-90, in the Embar sand at 3,100 feet, and No. 1 Fort Collins, SE Section 26-43-91, fishing at 3,438 feet. Same company's No. 7-A, SW Section 2-26-90, Lost Soldier Field, is in dark sand at 2,525 feet.

Prairie Oil & Gas Co. is moving in equipment for a test on the Alkali Creek Dome, in Sweetwater County, just north of the Colorado line and northeast of the Hiawatha Dome operation on the Colorado side. The location is on the Flinn permit in SE NE Section 18-13-99. Fuel will be obtained from the gas well drilled by W. T. Morris and associates on the Hiawatha Dome, which is shut in with a gauged capacity of 57,000,000 feet. This is one of the four structures in the Vermillion Creek area, one of which, the Hiawatha, only has been tested. The Ohio Oil Co. and the Reiter-Foster Oil Corp. are both drilling on the Hiawatha Dome. Gas from this area figures in the proposed pipe line to Salt Lake City.

Reports from the Garland Dome in the Big Horn Basin are to the effect that the Ohio Oil Co.'s No. 2 Cross Gas, Section 33-56-97, which last week reported 40,000,000 feet of gas with 1,400 pounds of pressure in the Embar sand at 3,163 feet, is to be completed at the present depth as a gas well without attempting to reach the Tensleep and that another well to test the lower horizon will be started. The gas, which followed a flow of 30,000,000 feet from the upper part of the same horizon, is said to be very wet which encourages the hope that if a hole can be put down to the Tensleep that oil will be encountered.

Colorado

Interest in Colorado operations are at present centered principally in the Sundance sand tests in Moffat, Routt and Rio Blanco Counties, all of which are nearing the objective horizon. The Texas Production Co. is drilling one test to the Sundance on the Tow Creek Dome, two on the Iles Dome, one on the Moffat Dome and one on the Rangely Dome. The Midwest Refining Co. is drilling three on the Iles Dome and one on the Rangely Dome.

The Midwest's No. 4 Parkinson, SE Section 22-4-92, on the Iles Dome in Moffat County, the discovery well in the new horizon which came in last April with a natural flow of 2,600 bbls. and started the present drilling compaign, is at present producing around 500 bbls. a day, this coming through a one-fourth inch nipple with a back pressure averaging 625 pounds. It appears to be just as big a well now as when it was drilled in nearly five months ago. No tests have been made with the valve wide open recently, however, and it cannot be said definitely just what it would do.

The status of the Iles Dome tests drilling around the No. 4 Parkinson location is as follows: Midwest Refining Co.'s No. 18-SD, SW Section 23-4-92, is drilling Dakota formation and has about 300 feet to go to reach the Sundance. At 3,015 feet, it had a showing of 5 to 8 bbls. from the shale below the Dakota. The same company's No. 34-SD Parkinson, SW Section 23-4-92, is drilling at 2,545 feet and had a show of shale oil at 2,540 feet. The 10-inch casing was mudded at 2,350 feet. The same company's No. 4-SD Shaw, NE Section 27-4-92, is drilling in shale at 2,750 feet. The Texas Production Co.'s No. 1 Parkinson, SW Section 23-4-92, is drilling in gray sand at 2,970 feet and carrying the 8¼-inch at 2,944 feet. Same company's No. 2 Parkinson, NW Section 23-4-92, is cleaning out at 2,932 feet and carrying the 8¼-inch at 2,914 feet.

These wells when completed will give a better lineup on the possibilities of the new horizon, and until it is known definitely what can be expected from them, there appears to be no hurry to carry out pipe line construction. The Midwest's one producer from the Sundance is beaned down to 500 bbls. and the oil is being run through a small line to the Moffat Dome where it is turned over to the Texas Production Co. for transportation to Craig, on the Denver & Salt Lake Railroad. The Texas Company has considerable storage at Craig which it is lending to the Midwest. When the well first come in a 55,000-bbl. tank was filled and the oil sold to The Texas Company for its refinery at Casper so that the tank might be emptied.

May Need Pipe Line

It will be recalled that three years ago, shortly after the Moffat Dome well came in in the Dakota sand, the Prairie Oil & Gas Co. had extensive plans for building a pipe line from Moffat County to Parco, Wyo. It erected storage at Craig and laid a 4-inch line from the Moffat Dome to that point. Tests were made, but the prospective production was not considered sufficient to go ahead with the major project. The pipe line and tanks, loading racks, etc., were sold to the Texas Production Co. which has since been operating them. The Midwest has purchased a site for a tank farm at Craig and made surveys for a line from the Iles Dome, but construction has not commenced, pending the completion of the wells now drilling. If the Texas Production Co.'s wells also come in, that company will have the question of pipe line facilities to solve as the present line is too small to handle any considerable production. The project of a line from Moffat County to Parco, or to some point on the Union Pacific in Wyoming, or to Laramie, probably will be revived if the Iles Dome tests come up to expectation, but at present the matter is being held in abeyance.

The only well drilling on the Moffat Dome is the Texas Production Co.'s No. 10 Basil Knowlton, Section 33-5-91, one of the series of tests in that general area headed for the Sundance. It is cleaning out at 4,146 feet with the 6¼-inch casing at 4,127 feet. It is through the Dakotas and probably within less than 200 feet of the Sundance. The pro-

(Continued on Page 140)

CANADIAN TEST BAILING 250 BBLS. WILL BE DRILLED TO LOWER SANDS

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Aug. 20.—With a bailing production of 250 bbls. a day at 3,090 feet depth, Devenish Petroleums, Ltd., LSD 5, Section 27-5-14w4, is to be carried deeper. At 3,090 feet depth the test was 10 feet in the sand supposed to be the Ellis, and it was claimed that the swabbing production of 250 bbls. a day could be increased to 500 bbls. on a gas lift. The production is a 23 Baume crude. It is possible the test may be deepened to the Madison limestone for a thorough test of the formations in this part of southern Alberta.

In the Highwood district of the southern foothills, Imperial Oil, Ltd.'s, No. 1 Highwood, LSD 3, Section 36-18-3w5, is reported to have got the lower Kootenay at 2,660 feet with a light but steady flow of gas. This was cased off with the 10-inch, and is coming up between that and the 12½-inch casing. Since the gas was struck the hole has been deepened to 2,715 feet, where the casing has been cemented. It is reported that the formations here correspond very closely to those in the Royalite Oil Co.'s No. 4 in the Turner Valley Field, which is similarly situated in the foothills.

In the Turner Valley Field, McLeod Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, which has a small pumping production of light crude, about 9 bbls. a day at 2,400 feet, may be carried to the deeper producing horizon in the Madison limestone. The string of 8¼-inch casing was set at the bottom of the hole, and if it can be moved freely so the drillers can underream, the 8¼-inch will be carried to 2,800 feet depth and the test continued to the deep lime with the 6-inch.

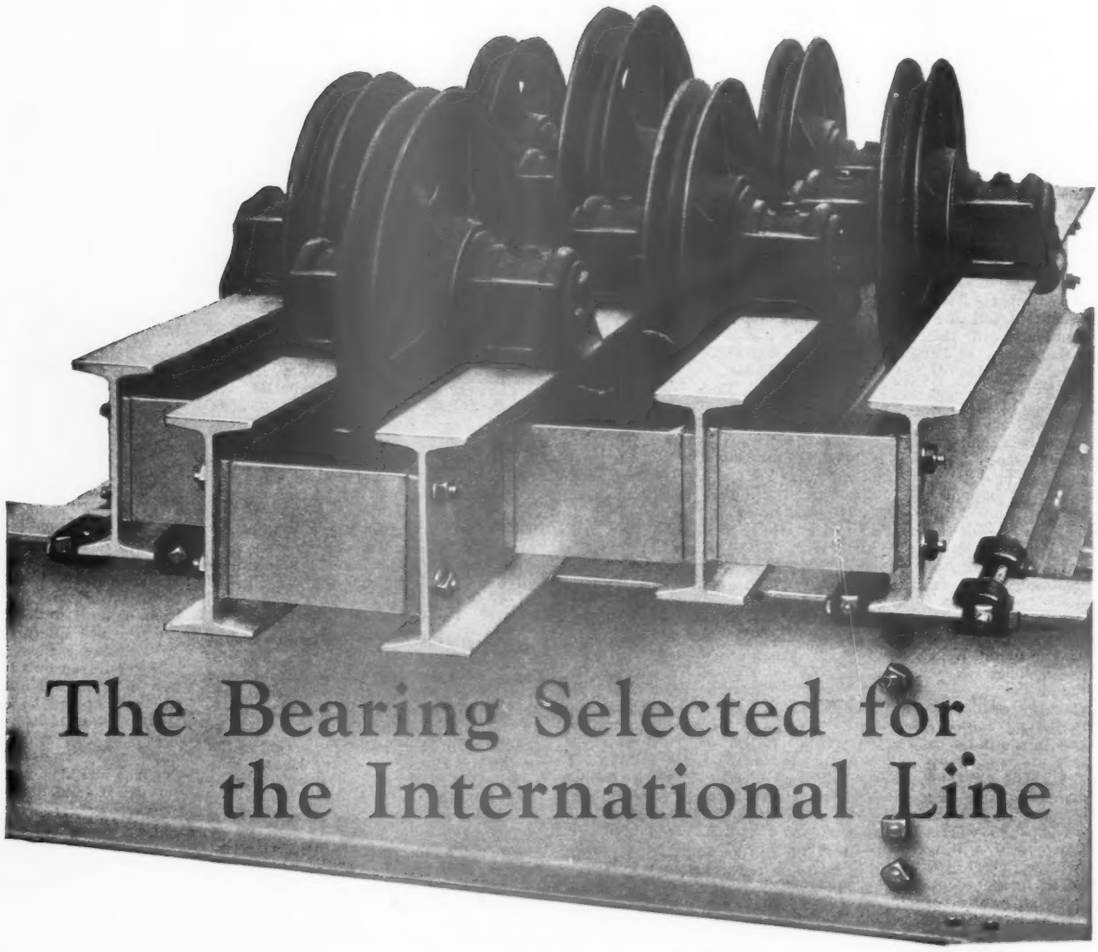
McLeod's No. 3, same LSD, in the Dakota sand at 3,200 feet, is making between 50 and 60 bbls. a day on the pump, the production, a light crude, being stored for the present at the Royalite Oil Co.'s plant. McLeod's No. 2, same LSD, is making around 50 bbls. a day of crude naphtha from the Madison limestone at 4,363 feet. A line has been laid from McLeod's No. 3 to the Royalite plant to handle the production.

Increases Its Output

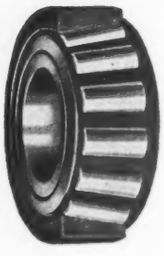
Illinois-Alberta Oil & Refining Co.'s No. 1, LSD 14, Section 12-20-3w5, is reported making from 80 to 87 bbls. a day with a slight increase over the 83-bbl. average for the three months ending June 30. Illinois-Alberta's No. 2, same LSD, is reported rigged up and practically ready to spud in.

Home Oil Co.'s No. 2, LSD 14, Section 20-19-2w5, is being cleaned out

(Continued on Page 132)



The Bearing Selected for the International Line



MORE LOAD CAPACITY. That inescapable fact is very largely the reason for Timken preference throughout the oil fields. By adopting Timken Bearings, the International Derrick and Equipment Company builds in greatest possible capacity not only for radial loads, but for *thrust and shock!* All load from all directions is equally well handled by Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS*, and super-enduring Timken-made electric steel.

No auxiliary parts are needed, and there is no moving contact outside of the bearing itself. With nothing but rolling motion, in simple, compact, perfectly enclosed housings, there is no perceptible wear. Alignment is permanently maintained with almost no attention, even for lubrication.

Only Timken Bearings can assure all these advantages in crown blocks and other equipment.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

Expect to Maintain California Output

Present Indications Point to Large Production During Remainder of This Year and Most of Next. Much Shut In

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Aug. 20.—With the end of the summer period not very far ahead, California operators are again faced with the possibility of having to store surplus oil during the coming winter months. The West Coast does not experience the same drastic changes in temperature which occur in less favorably located sections, and hence gasoline consumption does not show as violent fluctuations between the summer peak and winter low. There is no getting away from the fact, however, that the demand on the West Coast falls off during the winter months, due to decreased motoring incident to the rainy season and restricted travel following conclusion of the summer vacation period. In anticipation of a smaller demand during the last quarter of this year and a still greater reduction during the first three months of 1928, operators are naturally watching the production situation very close ly. Along about the first of this year the writer voiced the opinion that California daily production could not be expected to fall below the 600,000-barrel mark during 1927. Since that prediction an additional 30,000 barrels of daily production has been shut in, but, notwithstanding this fact, the total state output is still in excess of original prognostications.

The present production situation in California is not unduly embarrassing, due to the splendid spirit of co-operation between the larger California companies in curtailing crude oil production. The only kick back on this policy lies in the fact that it was not carried far enough. An additional 20,000 barrels should be closed in immediately and kept curtailed indefinitely. There has been some talk of operators gradually opening up the light oil now shut in, but the writer can see no basis for any such action; in fact, it looks like the restriction in light oil made on May 1 will continue in force until next year, unless someone throws a wrench in the machinery during the interim.

Those in close touch with the local situation have not yet changed their old slogan of "too much oil" at any time during the past few years, and so far this attitude has been entirely justified. The industry today, however, is not interested particularly in the past, but is, on the other hand, vitally concerned with what the future holds in store.

Big Year in 1928

Present indications all point to a big year in 1928 as far as quantity production of crude oil is concerned, and only a confirmed optimist can see any improvement except that consumption of petroleum products should continue to increase from year to year. With the national situation in poor shape, due to the prolific tendencies of Seminole and a possibility of West Texas bursting into the limelight next year, it looks as though California producers are in for a prolonged period of suspense. At any rate, it will probably be several years before California can even expect to be independent of the East Coast, and the reserves now in sight in undrilled acreage practically guarantee ample production for this section during the next ten years. Recent developments in wildcatting circles indicate the advent of two or more new fields possibly within the next six months. These new areas won't mean much in 1927, but may prove of paramount importance in 1928. The outlook therefore is rather disconcerting, and every indication points to another poor year from a financial standpoint.

One of the most important recent developments was the finding of an oil sand in the Gulf Production Co.'s well in the Casa Loma or Union Avenue district in the city of Bakersfield, in Kern County, several weeks ago. The importance of this find, revealed by core samples, lies in the fact that if commercial production is secured it will upset well established geological deductions covering this area. In other words, the oil just simple isn't supposed to be there. Perhaps it isn't, but if a 22-foot oil sand means anything it shou'd be. The San Joaquin Valley may be likened to a large elongated basin running in a northwest-southeasterly direction, with the various oil fields scattered at infrequent intervals along the west side. The eastern side of the valley and the intervening flat country lying between the two extremes has not generally been regarded as very favorable.

The discovery of new fields at Mount Poso and Round Mountain and the probability of a new find just south of Bakersfield tends to indicate that the original theories regarding the floor of the valley are all wet. At any rate, a lot of wildcatting is expected to be done in that vast area during the next several years. The Associated drilled several dry holes a year or so ago in and around Raisin City, and, while some showings were found, commercial production was not developed. The only bad feature, and one which will probably retard drilling, is the fact that granitic outcrops are quite prevalent all through the San Joaquin Valley. On the other hand, the Shell found oil at Mount Poso in spite of these granite deposits, and in drilling a deep test in that field later definitely established the fact that there is a granite deposit beneath the Vedder horizon.

Leasing activities indicate that wildcatters intend to concentrate their activities for the present in that paricular area lying between the Mount Poso and Round Mountain Fields, and also south of Bakersfield in the Greenfield and Edison districts. This work should be watched very closely, as it might prove productive. Development work in proven fields resulted in the completion of several good wells during the past week. Ventura headed the list with two dandy flowing wells, both of which were brought in by the Shell Company. Several other potential producers in that same field are nearing completion, and they should be tanking oil soon. Drilling operations at Seal Beach are progressing very satisfactorily, and the deep sand wells finished in that field recently have proven a powerful stimulant to deep work. Not many new projects are being started in the town lot area, but operators having small producers in the Selover sand are not letting any grass grow under their feet in going after this deep sand, which so far has been yielding 1,500 and 2,000-barrel wells quite regularly of late. In addition to Ventura Avenue and Seal Beach, several other fields appeared quite prominently in the current weekly completion list, but in most cases the new wells finished were relatively small, and of no particular consequence. With the exception of drilling operations at Seal Beach, the most important work under way at present is centered in three or four promising wildcat areas which may result in the opening up of a new field at any time. This phase of the present situation will be found under an appropriate heading below.

Seal Beach

The past week saw several more wells taken off production in the Alamitos Heights section of the Seal Beach Field, preparatory to being carried down to the deep zone, which was definitely proven up for big production several weeks ago. The Petroleum Securities, as would naturally be expected, inasmuch as this company was the pioneer in the town lot area, heads the list as far as this character of work is concerned. It has an even dozen deepening projects under way at the present time, several of which should be recompleted in the deep zone in the very near future. The Petroleum Securities finished three additional deep sand wells during the current week, the total production aggregating 4,015 barrels per day. One of this trio was a new well which passed up the Selover sand and was drilled direct to the deep zone. This was No. 1 James, which registered an initial daily production of 540 barrels daily from 5,110 feet, the hole being finished with a 6¼-inch oil string carrying 110 feet of shop perforated. The company also recompleted No. 1 Murphy and No. 1 Heller, the former being redrilled and deepened from 4,930 feet to 5,072 feet and the latter from 4,990 feet to 5,053 feet. No. 1 Murphy, which was originally finished in June of this year as a 2,000-barrel well, was recompleted a few days ago, doing 2,270 barrels of clean 28.9 gravity oil daily. No. 1 Heller, which came in doing 250 barrels a day from the Selover zone last month, has just been recompleted, flowing 1,205 barrels of clean 28.8 gravity oil daily from

(Continued on Page 132)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, Well, Location	S-T-R	Depth	Status
Cal. Eastern, No. 1 Cypress, Potrero	27- 3-14	5,043	suspended
Associated, No. 1 Cypress, Potrero	34- 2-14	4,450	resume work
Getty, Geo. F. No. 1 Tubbs, Rivera	25- 2-12	4,700	gr. sd. drilling
Mont. Park Oil Co., No. 1 Browning, Monterey Park	26- 1-12	rig	Rigging up
Circle Oil Co., No. 1 Pomeroy, Manchester	23- 3-14	4,280	suspended
Shell, No. 1 Mission, San Fernando	4- 2-15	3,660	hd. sd. drilling
South. Calif. Drlg. Co., No. 1 Matteson, El Segundo	1- 3-15	4,870	plug back
Carr, O. P., No. 2 Foster, San Juan Capistrano	13- 8- 8	2,000	gr. sd. drilling
Thomason & McCoy, No. 1 Ring, Saugus	27- 5-16	1,580	gr. sd. drilling
Southwest Pet. No. 1 Ramsauer, Watts	4- 3-13	2,803	hd. sd. drilling
San Clemente Oil Co., No. 1 Peck, Hawthorne	20- 3-14	3,012	hd. sd. drilling
West. Oil & Ref. Co., Well No. 1, Hawthorne	29- 3-14	Mtl.	building rig
White Behr, No. 1 Watson, L. A. County	21- 4-14	rig	Rigging up
Shell, No. 1 Allec, Placentia	31- 3- 9	2,173	congl. drilling
Standard, No. 1 Olive, Orange Co.	17- 4- 9	2,616	hd. sd. drilling
Standard, No. 1 Rindge, Palms	35- 1-15	rig	in litigation
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	1,321	hd. sd. drilling

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Associated, No. 1 Smith, Kettleman Hills	12-23-18	2,043	suspended
Bolsa Chica, Well No. 1 Kettleman Hills	30-23-19	3,056	to test
General Pet., No. 1 Burbank, Ketileman Hills	30-23-19	3,165	pipe bad
General Pet., No. 2 Oschener, Kettleman Hills	26-22-18	4,197	gr. sd. drilling
General Pet. No. 1 Dome, Kettleman Hills	4-24-19	2,450	hd. sd. drilling
C. C. M. O., No. 1 McGlashan, Kettleman Hills	17-24-19	4,721	clean. out
South Coalinga, Well No. 1, Kettleman Hills	35-24-19	2,602	suspended
Ahlburg Gas Co., Well No. 1, Kettleman Hills	7-23-23	rig	standing
Milham Explin., No. 1 Kettleman, Kings Co.	2-22-17	3,598	pipe bad
Shell, No. 2 Beryiwood, Moorpark	32- 3-20	4,481	hd. sd. drilling
C. C. M. O., No. 1 Hobson, Ventura Co.	22- 3-24	6,545	will test
C. C. M. O., No. 1-B Hobson, Ventura Co.	16- 3-24	4,900	W. S. O. N. G.
Pan-American, No. 1 State, Ventura Co.	17- 3-24	150	electric equip.
Pan-American, No. 1 U. S., Ventura Co.	17- 3-24	Mtl.	building rig
Scott Petroleum, No. 1 Surf, Ventura Co.	35- 4-24	Mtl.	building rig
Continental Oil Co., No. 1 Burnham, Ventura Co.	22- 5-18	3,030	gr. sd. drilling
Standard, No. 1 Camarillo, Ventura Co.	29- 2-20	5,469	dry
Standard, No. 1 Montalvo, Ventura Co.	17- 2-22	6,720	hd. sd. drilling
Petroleum Sec., No. 1 Diablo, Ventura Co.	26- 5-18	2,785	fishing
Parkford, E. A., No. 1 Strathern, Ventura Co.	5- 2-18	3,600	hd. sd. drilling
Star Petroleum, No. 1 Canet, Ventura Co.	13- 3-23	5,240	fishing
Richfield, No. 27 Piru, Ventura Co.	35- 5-18	1,620	hd. sd. drilling
Milham Explin., No. 2 Buttonwillow, Kern Co.	8-28-23	4,662	gas well
Milham Explin., No. 3 Buttonwillow, Kern Co.	7-29-24	4,019	clean. out.
Pacific Eastern, No. 1 Bakersfield, Kern Co.	6-30-28	4,392	pipe bad
Kerwin & Seal, No. 1 Edison, Kern Co.	4-30-29	rig	Rigging up
Getty, George F., No. 1 Edison, Kern Co.	22-29-29	rig	Rigging up
Mays & Valencia, No. 1 Machado, Kern Co.	31-30-28	Mtl.	building rig
C. C. M. O., No. 1 Quinn, Delano	23-25-27	2,281	to plug back
Petroleum Sec., No. 1 Aniotz, Monterey Co.	2-22- 9	2,670	to abandon
Richfield, No. 1 Wreden, San Luis Obispo Co.	10-29-17	721	cemented
Shell, No. 1 Cowell, San Mateo Co.	8- 6- 5	4,200	hd. sd. drilling
Shell, No. 1 Murphy, Petaluma	29- 5- 6	5,970	hd. sd. drilling
Shell, No. 1 Ielmorini, Sonoma Co.	14- 5- 7	2,153	hd. sd. drilling
Thomas & Hammill, Well No. 1, Alameda Co.	16- 3- 3	1,180	hd. sd. drilling
Continental, No. 1 Sargent, Santa Clara Co.	31-11- 4	2,600	100 bbls. oil
Elliott & Clarke, No. 1 Marcos, Santa Barbara Co.	34- 7-29	929	hd. sd. drilling
Becker, G. F., No. 1 Summerland, Santa Barbara Co.	33- 4-25	3,071	sd. sh. drilling

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total This Week	Daily Average	Total Last Week	Daily Average	This Year to Date	Same Time Last Year
Crude oil	418,290	59,756	167,192	23,885	6,199,583	8,207,712
Fuel oil	142,862	20,409	56,726	8,104	5,045,683	3,778,318
Diesel and gas oil	.....	.....	91,898	13,128	1,927,501	1,813,848
Gasoline	211,484	30,212	289,775	41,396	6,387,556	4,440,050
Tops	.....	.....	.....	.....	.....	149,906
Coastwise—						
Crude oil	455,298	65,043	478,565	68,366	16,429,822	15,129,411
Fuel oil	311,670	44,524	121,808	17,401	7,379,515	6,722,420
Diesel and gas oil	.....	.....	16,629	2,376	228,010	136,782
Gasoline	297,089	42,441	175,119	25,017	5,863,993	4,585,338
Kerosene	.....	.....	.....	.....	105,769	142,744
Tops	.....	.....	42,025	6,004	104,595	430,579
Exports—						
Crude oil	.....	.....	.....	.....	1,644,733	2,759,363
Fuel oil	393,119	56,160	648,149	92,593	17,409,399	10,703,467
Diesel and gas oil	.....	.....	12,010	1,716	839,286	274,767
Gasoline	139,961	19,994	201,345	28,764	2,889,164	2,870,017
Tops	.....	.....	.....	.....	227,204	.....
Kerosene	.....	.....	.....	.....	1,382,830	1,621,840

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Diesel and gas oil	.....	.....	.....	.....	505,608	1,090,988
Gasoline	78,029	11,147	.....	.....	1,338,490	701,990
Tops	.....	.....	.....	.....	.....	73,698
Lubricants	.....	.....	.....	.....	244,826	215,617
Coastwise—						
Fuel oil	126,513	18,073	214,297	30,614	3,588,174	3,315,343
Diesel and gas oil	.....	.....	.....	.....	207,012	.....
Gasoline	30,650	4,379	.....	.....	3,197,060	3,099,632
Kerosene	.....	.....	.....	.....	149,472	262,813
Exports—						
Fuel oil	54,930	7,854	144,046	20,578	1,615,923	2,420,978
Gasoline	.....	.....	.....	.....	1,946,318	1,203,514
Kerosene	.....	.....	.....	.....	565,156	1,251,859
Lubricants	.....	.....	.....	.....	9,120	18,051

WORTHINGTON

WORTHINGTON PRODUCTS

PUMPS
steam and power, reciprocating and centrifugal

COMPRESSORS
air, gas and ammonia

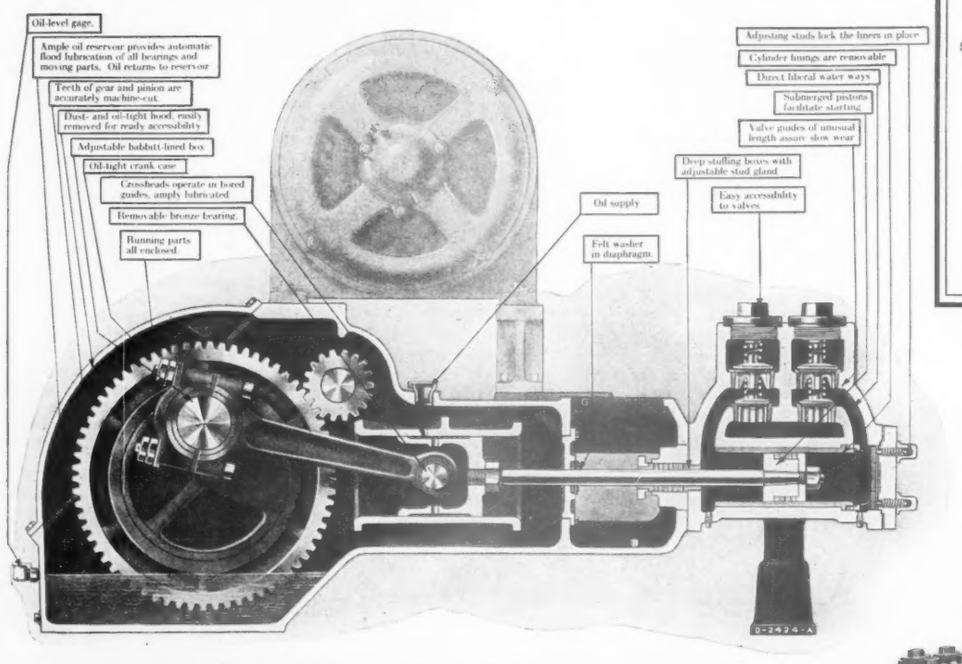
CONDENSERS
surface, jet, barometric and auxiliaries

OIL *and* GAS ENGINES

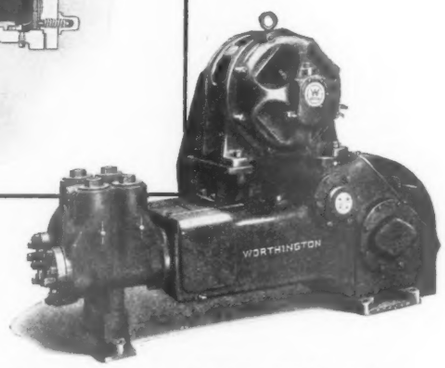
FEEDWATER HEATERS
locomotive and stationary

METERS
boiler-feed, water, oil

Literature on request


Oil-level gage.
Ample oil reservoir provides automatic flood lubrication of all bearings and moving parts. Oil returns to reservoir.
Teeth of gear and pinion are accurately machine-cut.
Dust- and oil-tight hood, easily removed for ready accessibility
Adjustable babbitt-lined box
Oil-tight crank case
Crossheads operate in bored guides, amply lubricated
Removable bronze bearing
Running parts all enclosed
Oil supply
Felt washer in diaphragm
Adjusting studs lock the liners in place
Cylinder linings are removable
Direct liberal water ways
Submerged pistons facilitate starting
Valve guides of unusual length assure slow wear
Deep stuffing boxes with adjustable stud gland
Easy accessibility to valves
D-2424-A

Sectional view of Worthington Duplex, Double-acting, Piston-pattern, Horizontal Power Pump. For 1455 to 6685 barrels per 24 hours, pressure from 350 to 1400 lb. per sq. in.



Worthington Duplex, Double-acting, Horizontal Power Pump. The fluid end of this pump is of the Pot-valve type. (Sectional view is shown above.)

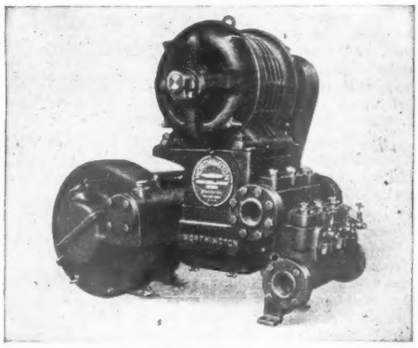
Horizontal Fully Enclosed Power Pumps

Duplex, Triplex, Dirt Proof, Self-Oiling

THE entire driving mechanism of these sturdy, new oil field pumps is enclosed in a cast-iron case or cover—fully protected from dust and grit. All moving parts are splash lubricated from the oil in the crank case insuring positive lubrication at all times. The teeth of the gear and pinion are accurately machine cut and of liberal proportions to insure necessary strength, long-wearing qualities and quiet operation.

These pumps are unquestionably the best obtainable for the services for which they are offered. Send us your inquiries.

There is a Worthington Pump, reciprocating or centrifugal, steam or power-driven, for every oil-field, pipe-line and refinery requirement. Write for literature.



Worthington Triplex Enclosed Self-oiling Horizontal Triplex Pump, outside-packed plunger type, motor driven. Gear ratio 6:1, permits direct-connection to 1200 r.p.m. motor or engine without adding any gears or belts.

6235-4

WORTHINGTON PUMP AND MACHINERY CORPORATION, 115 BROADWAY, NEW YORK, BRANCH OFFICES IN 24 CITIES

Important Test in Northwestern Ohio

Second Attempt To Follow Small Showing in Forest Area of Wyandot-Hardin Counties

By Whit

Staff Correspondent, Central West Fields

FINDLAY, Ohio, Aug. 22.—With a fairly good number of completions reported from the Central West Field, comprising the Lima Field, Central Ohio, Indiana and Illinois, the new production found amounted to but little. There was a total of 38 wells completed, 11 being producers with an initial of 135 bbls., 11 dry holes and 16 gas wells. The number of gas wells was larger than usual, and the general average volume better than for some time back, some of the wells being drilled in advance of production, especially in the Cleveland Field of Cuyahoga County where the larger gas volume was uncovered.

With Indiana and Illinois areas failing to report any real producers it was up to the Lima Field and Central Ohio to make a showing, but nothing out of the ordinary was found. The best in the Lima Field was No. 17 on the W. C. Disher farm, Mississinewa Township, Darke County, with an initial pumping of 30 bbls., and a 25-bbl. producer in No. 26 on the J. H. Haley farm, Eagle Township, Hancock County, between Lima and Findlay. A wildcat drilled on the Whetstone farm, Section 27, Logan Townsite, Auglaize County, may bring about some additional work in that part of the field.

The drilling of a deep test to a depth of 1,925 feet far to the north of the old Casey-Westfield Field, on the Thompson farm, Section 30, Stratton Township, Edgar County, Illinois, failed to show any commerical oil indications and has been abandoned. Many wells have been drilled in wildcat territory in this county during the past few years with no results and the deep hole makes it look as though oil did not exist in several of the townships of the county. Quietude prevails in all parts of the Central West, outside of Central Ohio.

Lima Field

Another important test has been made in the Forest area along the line of Wyandot-Hardin Counties, in the old Lima Field of northwestern Ohio, and while the well only makes a small showing of gas it may lead to better production with some additional test work. The new well was drilled by a syndicate of farmers on the Nathan Kear farm, better known as the old Cole farm, 2 miles west of Wharton, 4 miles north of Forest, southwest of Carey and in the western portion of Wyandot County. In this test 13 feet of 8-inch drive was put in, while a string of 315 feet of casing was set. Top of Trenton was found at 1,299 feet, and drilled 108 feet in the Trenton sand to a total depth of 1,407 feet, and it was given a 120-quart shot, the shot being set from 15 to 45 feet in the Trenton. The well has a rock pressure of 120 pounds but only reported with a volume of 20,000 feet of gas. There was also a light showing of oil and gas in the shale formation, but not in quantities to encourage trying to make a paying oil well from it.

Drillers Temple, Henry and Brice start immediately to drill a second test on the Andy Wells farm about 1,500 feet east of No. 1 Kear, just completed. No. 1 on the Wells farm was drilled about 40 years ago, and remaining native citizens around this well claim that the old well flowed oil for three weeks at the rate of a tank a week and stick to their story that this is of their own knowledge. No. 2 well will be only a short distance from the original well on the farm. The Kurtz well, which was a good gasser when completed a few weeks ago, is across the line in Hardin County near Patterson and it is reported that W. F. Kurtz, who drilled the well on his own farm, has started litigation against the Forest Gas & Oil Co. and John Hertzog & Son, in Circuit Court at Kenton, Ohio, to recover No. 1 on the Kurtz farm, also 140 acres of lease around the well.

In Mississinewa Township, Darke County, at the southwestern part of the old Trenton Rock area, the Cole Oil & Gas Co's. No. 17 well, 800 feet from the north line and 900 from the east line of the W. C. Disher farm, in the northwest quarter of Section 11, tapped top of Trenton at 1,217 feet and went 41 feet in the sand, the well pumping 30 bbls. the first 24 hours run.

In the Elmore Field, Harris Township, Ottawa County, the Elmore Oil & Gas Co's. No. 9 well, 700 feet from the north line and 290 from the east line of the John B. Netcher farm, in the southeast quarter of Section 19, struck a heavy dose of salt water at 28 feet in the sand, which was topped at 1,272 feet and went to a total depth of 1,300 feet.

T. G. Ayres drilled in his third well, 1,500 feet from the south line and 300 from the east line of the Mrs. Albert Rockwood farm, in the northwest quarter of Section 26, Hopewell Township, Mercer County, topping the sand at 1,119 feet and drilling 38 feet in the sand, finding an 8-bbl. initial pumper.

In Logan Township, Auglaize County, Wesley Sprague and others' wildcat, 1,300 feet from the north line and 500 from the east line of the H. C. Whetstone farm, in the southeast quarter of Section 27, struck top of Trenton at 1,170 feet and went 55 feet in the sand, the well producing 10 bbls., initial.

B. Porter and others' No. 26 well, 800 feet from the north line and 1,200 from the south line of the J. H. Haley farm, in the southeast quarter of Section 5, Eagle Township, Hancock County, not far from Dixie Highway west of Findlay, tapped sand at 1,212 feet and at 75 feet in the sand showed an initial pumping of 25 bbls.

In the Colt Pool, in Perrysburg Township, Wood County, south of Perrysburg, the Oko Oil & Gas Co's. No. 13 well, 1,400 feet from the north line and 1,450 from the east line of the George Deverna farm, in the southeast quarter of Section 29, pumped an initial of 8 bbls. Top of sand was at 1,245 feet and oil at 42 feet in the sand. Some few miles to the northeast of the above well, George Hoffman and others' test, 200 feet from the north line and 410 from the west line of the Charles Keller farm, in the southwest quarter of Section 23, pumped 4 bbls., at 75 feet in the sand, tapped at 1,264 feet. This well is 500 feet east of No. 1 on the Mary Ritzel farm, some distance in advance of production in other parts of the township.

Indiana

Only one well was reported for the week from the Indiana Field, and that was a dry hole drilled by the Ohio Oil Co., in its No. 7 well, 100 feet from the north line and 800 feet from the west line of the N. B. Coffman farm, in the southeast quarter of Section 26, Madison Township, Pike County, which proved dry at a total depth of 1,327 feet. This company also abandoned No. 3 on the W. H. Gladish farm, Section 6, owing to the inability to recover a string of tools that dropped in the hole in cleaning out.

The initial well of Hartman, Sargent and others in the northeast corner of the Otis Wildman farm, in the southeast quarter of Section 21, Veale Township, Daviess County, is credited with an initial 24 hours' production of 125 bbls. The Home Oil Co's. No. 3 on the National City Bank Co's. property, Section 16, same township, is reported a rank failure.

Hartman, Sargent and others are working at a test in advance of production on the Robert May farm, near the hamlet of Donaldson.

Reports from the southern part of Vigo County and the northern part of Sullivan County, are that the Siosi Oil Corp. will start several tests along the dividing line of the two counties within a short time. Two good wells have already been found by this new company.

Illinois

Strong efforts have been made during the past few months to open up something worth while in parts of Illinois, but failure appears to follow the wildcatting. Once in a while a good well is found in the older fields that spur on further operations.

The latest test of importance to be made was the wildcat of the Ohio Oil Co., 255 feet from the north line and 375 from the east line of the W. A. Thompson farm, in the east half of the southeast quarter of Section 30, Stratton Township, Edgar County and north of the old Casey-Westfield Field of the early days of the development. This wildcat was drilled for a deep test and failed to find anything worth while at a depth of 1,925 feet, where it was abandoned. A number of wells have been drilled in advance to the north of the old producing areas during the past year or so, resulting in nothing but dry holes.

In the old development about 5 miles south and 4 miles east of Casey, in Johnson Township, Clark County, two completions are reported, but both failed to find oil in commercial quantities and are listed as dusters. They are Thomas Stewart and others' No. 5 well, 1,000 feet from the south line and 200 from the west line of the B. F. Bailey attorney, farm, Section 13, also No. 6 well, 1,000 feet from the south line and 200 from the west line of the same farm, the depths being 645 and 600 feet, the usual depth in which in the early days produced excellent wells, some doing as high as several hundred barrels, initial. Chances are that production might have been found in the lower sands, known as the Spray sand, then the Niagara Limestone, and still lower down in the Trenton rock, as production has been found to the north in Martinsville Township, same county, in all three lower formations.

Central Ohio

Development work is improving in the Central Ohio Field, as the gas companies are increasing work in most of the gas-producing counties. Since the last report from the field there have been 26 wells completed, 5 producers with an initial production of 50 bbls., 6 dry holes and 15 gas wells. In the Cleveland Field of Cuyahoga County alone six good gas wells out of eight completions were found, the bulk of the work in that field being centered in Olmstead Township at this time although work is picking up in both Strongville and Dover Townships. In Olmstead Township, the gas is being developed in the Newburg sand. In this township, the Logan Gas Co., hit an excellent gas well at No. 1 in the northeast corner of the Don B. Hall 29 acres, Lot 22. Hulse and Kundtz, Cleveland contractors and operators, landed another nice gas producer in No. 1 in the southwest corner of the W. F. Prechtel 8 acres, Lot 71, and are drilling a test 425 feet from the north line and 200 from the west line of the A. Shoba 10 acres, Lot 29. Arthur & Simpson struck the best of the late gas wells in No. 1 in the northeast corner of the G. W. Warner 43 acres, Lot 32, and another above the average in No. 1 in the northwest corner of the Dennison 3 acres, Lot 31. Same

(Continued on Page 131)

DEEPER DRILLING DELAYS WELLS IN SAGINAW FIELD, MICHIGAN

By Whit

SAGINAW, Mich., Aug. 20.—Development work is not being pushed in the Saginaw Field as in the past, although there is little change in the number of wells under way, but they are not being drilled in with the regularity of the past few months. Six completions are reported since the last report and all are producers from the Berea sand, as not many deeper tests are being made. It was the deep drilling that delayed the bringing in of more wells in the upper sand, which appears to be the real stable sand of the field. The Berea wells are holding up above expectations, but it is known to be a lasting sand wherever found.

The Saginaw Prospecting Co.'s No. 4 on the George Deindorfer farm, at the north edge of the city of Saginaw, in Section 14, Saginaw Township, and east of the city-owned Deindorfer Woods, where the discovery well was found, came in for an estimated production of 15 bbls. initial. Same company's No. 1 in the Mary Schabernoski property at Shattuck and Barnard Roads tapped the Berea sand at 1,819 feet and went 18 feet in the sand, shooting with 80 quarts, and shows for 15 bbls. initial. Top of the Berea in the No. 5 George Deindorfer farm was found at 1,812 feet and drilled 18 feet in and shot with 80 quarts. Same company's No. 3 on the Eddy Estate property on Mary Street, near the Pere Marquette Railroad, struck top of Berea at 1,805 feet and went 18 feet in the sand, shooting with 80 quarts and estimated with an initial close around 20 bbls.

Fordney Petroleum Co.'s No. 2 on the Dittmer-Raths property between Davenport Street and Genesee Avenue tapped the Berea at 1,803 feet, went 20 feet in the sand and shot with 80 quarts, and is estimated at 20 bbls. The same company's No. 1 on a community lease in the southwest corner of North Michigan Avenue and Davenport Street found sand at the usual depth and have what shows for a 15-bbl. initial producer.

The Sun Oil Co.'s No. 5 on the John Stelzreide farm, Section 11, Saginaw Township, tapped Berea sand at 1,835 feet and went to a total depth of 1,851 feet and was shot with 60 quarts, resulting in an initial pumper of around 15 bbls.

Sun Oil Co. is reported to have struck oil at 2,600 feet in its well near Ashley, Gratiot County, Michigan, the second to be brought in in this territory this summer, one six weeks old now making 25 bbls. daily.

Field Notes

Wicks Brothers are near pay sand with their second well on their own property near Carroll and Water Streets on the east side of the Saginaw River.

Jack Handricks and others on the Campau property, just south of the Grand Trunk railroad bridge on the west side

(Continued on Page 109)

Drilling Down Old West Virginia Wells

Walker District, Wood County, and Ritchie County Leading in Efforts to Revive Former Producers

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Aug. 22.—Since the eastern fields were last reviewed, development work has been almost featureless. No large wells were completed and the work generally was of the routine kind, located in territory that is well defined. As production in the Mid-Continent shows some inclination to decline, eastern operators are more hopeful and think if it continues to do so they will come into their own, once production and consumption get on a more even basis.

One encouraging feature to the eastern producer is the increased amount of crude the refineries are taking in the Pittsburgh districts. It is claimed that the refiners are loading up with cheap oil against the time when the market will advance. Producers are selling credit balances a little more freely than for some time. This would seem to indicate they do not anticipate an early advance in the crude market.

In a number of fields in West Virginia, operators are going back and drilling down old wells that are no longer producers from the upper sands. Walker district, Wood County, is leading in this kind of work. Ritchie County also has considerable of the same sort of operations.

Field Developments

In the extreme lower southwest, located on the waters of Whites Creek, Union district, Wayne County, West Virginia, the Chartiers Oil Co. has completed and shot its second test on the A. C. Dameron farm good for 2 bbls. a day. For a good many months the Chartiers company has been trying for new production in Wayne County, but has completed nothing better than very light pumpers.

One mile north of Martha Post Office, McComas district, Cabell County, on the Guyandotte River, the Pittsburgh & West Virginia Gas Co. has the rig completed and started to drill a test on the Thomas Morris farm. On the same river, district and county, the same company has started to drill a test on the Andrew Alberts farm. One mile southwest of Martha Post Office, on Mud River, Grant district, Cabell County, and one-half mile east of Balls Gap, the Monickel Gas Co. has completed a test on the B. L. Roberts farm. It is a gasser in the Berea grit good for 350,000 feet.

For a second successive day the West Virginia fields came very near reporting no completions. As it was, they reported but one, a light pumper. At Alum Cave, Grant district, Ritchie County, J. W. Jonas completed in the light oil sand No. 26 on the West Virginia tract. It is showing for a 5-bbl. pumper.

In Jefferson district, Pleasants County, the Amber Oil Co. is drilling No. 14 on the H. C. Severns farm. In Union district, Tyler County, the Little Flower Oil Co. has the rig completed for No. 4 on the Morgan Henderson farm. In Ten Mile district, Harrison County, the Hope Construction & Refining Co. is due in the sand at a second test on the T. J. Coffman farm. In PawPaw district, Marion County, the Hope Natural Gas Co. is due in the Big Injun sand at a test on the Rebecca Tennant farm.

Calhoun County

In Center district, Calhoun County, the Gerwig Oil & Gas Co.'s No. 2 on the H. Hardman farm is a gasser in the Big Injun sand. In Lee district, the Hope Natural Gas Co. has a gasser in the Big Injun sand at a test on the G. W. Hardman farm. In the same district, Smith & Starcher's test on the Joseph Slider farm is a gasser in the same formation.

In Walton district, Roane County, the United Fuel Gas Co. has a gasser in the Big Injun sand at a test on the Sarah F. Taylor farm. In DeKalb district, Gilmer County, the Philadelphia company has a duster in the Big Injun sand at a test on the Elbert Stalnaker farm. In Church district, Wetzel County, the Manufacturers Light & Heat Co.'s test on the J. M. Himelrick farm is a gasser in the salt sand.

In Clay district, Monongalia County, the Pittsburgh & West Virginia Gas Co. is drilling down from the Big Injun sand old No. 1 on the G. T. Moore farm.

In Courthouse district, Lewis County, W. M. Smith & Co. have a gasser in the Gantz sand at a test on the W. E. Whalen farm. In Grant district, Ritchie County, the Astron Oil Co.'s No. 6 on the Herman Strusburg farm is good for 5 bbls. a day in the Big Injun sand.

Wood County

In Union district, Wood County, Parsons & Sweeney have drilled No. 16 on the Rebecca Walker farm through the second Cow Run sand and dry. Going back to old abandoned wells and trying to reclaim them is quite a feature in this county. The South Penn Oil Co. is taking the lead in this work. In Walker district it is trying to bring back and put into the producing list No. 1 J. D. Walker, No. 2 M. M. and W. W. Pratt, No. 2 S. E. Masters, No. 2 S. E. Grant, and Nos. 1 and 2 Nettie M. Dye. These wells were all formerly producers in an upper sand.

In Grant district, Pleasants County, George Pickens & Co. drilled down to the Big Injun sand a second test on the William Hammett heirs' farm, and it is producing 35 bbls. a day. The location is in defined territory. In Lubeck district, Wood County, Park Bowser's second test on the Patrick Doyle farm is dry and abandoned.

On Laurel Creek, Union district, Wood County, Parsons & Sweeny have drilled No. 14 on the Rebecca Walker farm through the second Cow Run sand. It is a duster in this formation and will be drilled down.

In Henry district, Clay County, the Virginian Gasoline & Oil Co. has completed in the Big Injun sand a second test on the P. D. Summers farm. It is estimated good for 10 bbls. a day. Operations in this district continue to decline. All late completions have come in light producers.

Drilling Tests

In Union district, Wood County, Rothwell & Co. are rigging up to drill a second test on the John Freshwater farm. In Grant district, Ritchie County, the Hope Natural Gas Co. is rigging up to drill deeper its test on the J. M. Lewis farm. In the same district, the same company has shut down for gas on the O. C. Thomas farm. In the same district, the same company has a light show of oil and gas in the Squaw sand and Berea grit on the J. T. Cain farm.

In Mannington district, Marion County, Monroe & Laughlin are hauling rig timbers to a location on the J. W. Tennant farm. In the same district, the Buffalo Oil Co. is making a road to a location on the N. C. Grim farm. In Courthouse district, Lewis County, the Hope Natural Gas Co. has started to drill on the Clara A. Hill farm.

In McClellan district, Doddridge County, the Elkhorn Oil & Gas Co. has a rig up on the Edward Tate farm. In Carroll district, Lincoln County, the Ray Gas Co. has started to drill on the John Vickers farm. In Jefferson district, G. T. Ray & Son have started to drill on the James Cooper farm. In Murphy district, Ritchie County, Ira Haught and others have started to drill on the W. N. Nutter farm.

In Lee district, Calhoun County, McIntosh & Co. have started to drill on the Amy Haymaker farm. In Sherman district, the Sycamore Oil & Gas Co. has a rig up on the R. L. Stump farm. In Geary district, Roane County, the United Fuel Gas Co. has a rig up on the J. S. Keen farm. In Ravenwood district, Jackson County, B. L. Morgord & Co. are still fishing at 1,600 feet on the W. H. Harden farm.

The Delmar Oil Co. has shut down at 2,200 feet at its second test on the Anna Palmer farm in Church district, Wetzel County. In Liberty district, Marshall County, the Lynn Camp Oil & Gas Co. is due in the Big Injun sand on the Thomas Blake farm. In Eagle district, Harrison County, the Clarksburg L. & H. Co. is drilling No. 254 on the S. D. Gore heirs' farm.

In Center district, Wetzel County, the Manufacturers Light & Heat Co. is due in the Big Injun sand on the James Kirtland farm. In Duval district, Lincoln County, J. V. Reisman has started to drill on the D. G. Beheler farm. In Barboursville district, Cabell County, the Pittsburgh & West Virginia Gas Co. has spudded in on the Andrew Alberts farm. In Curry district, Putnam County, Wysong & Jaynes have started to drill on the Roberts-Vanderlinde farm.

In Union district, Ritchie County, the Carnegie Natural Gas Co. has the rig completed for a test on the C. J. Daugherty farm. In Paw Paw district, Marion County, the Owens Bottle & Machine Co. has started to drill on the Thomas Freeland farm.

In Ravenwood district, Jackson County, B. L. Morford & Co. are having casing trouble at their test on the W. M. Harden farm. In Geary district, Roane County, the United Fuel Gas Co. has made a location on the J. E. Keene farm.

Late Completions

In McClellan district, Doddridge County, Godfrey L. Cabot has completed a test on the Nathan Mayfield farm. It is a gasser in the Gordon sand. In the same district, the Murphy Oil Co.'s test on the Edward Maxwell farm is dry in all sands. It has been abandoned. In the same district, the Manufacturers Light & Heat Co. has rigs up on the Josephine Boyce and Nathan McDonald farm. In New Milton district, J. E. Trainer has started to drill his test on the F. F. Randolph farm. In Hackers Creek district, Lewis County, Earl Goodwin is drilling on the J. L. Jackson farm. In Ellsworth district, Tyler County, George McCutcheon is drilling on the D. W. Twyman farm. In Washington district, Boone County, the Owens Bottle & Machine Co. is drilling on the B. S. Ballard. In Sherman district, V. H. Halstead & Co. are drilling on the Frank Meadows & Co.'s farm. In Harvey district, Mingo County, the Old Colony Oil & Gas Co. is due in the sand on the Thomas Caldwell farm. In the same district, the same company is drilling on the Closterman estate and the Logan Cannel Coal Co.'s tract.

In Center district, Calhoun County, the Hope Construction & Refining Co. has shut down for orders at 2,210 feet at

(Continued on Page 181)

TWO LARGE WELLS IN OWSLEY COUNTY FEATURE OF WEEK IN KENTUCKY

By Whit
Staff Correspondent, Kentucky-Tennessee

WINCHESTER, Ky., Aug. 20.—For the first time in a long period two large wells are reported from the eastern Kentucky end of the State, while the productive Ambrose Pool in Ohio County, in the western division, that has been getting the big wells for several months, failed to report any out of the ordinary since the last report, as some of the operators in the rich territory have shut down operations on producing leases and expect to test out other holdings.

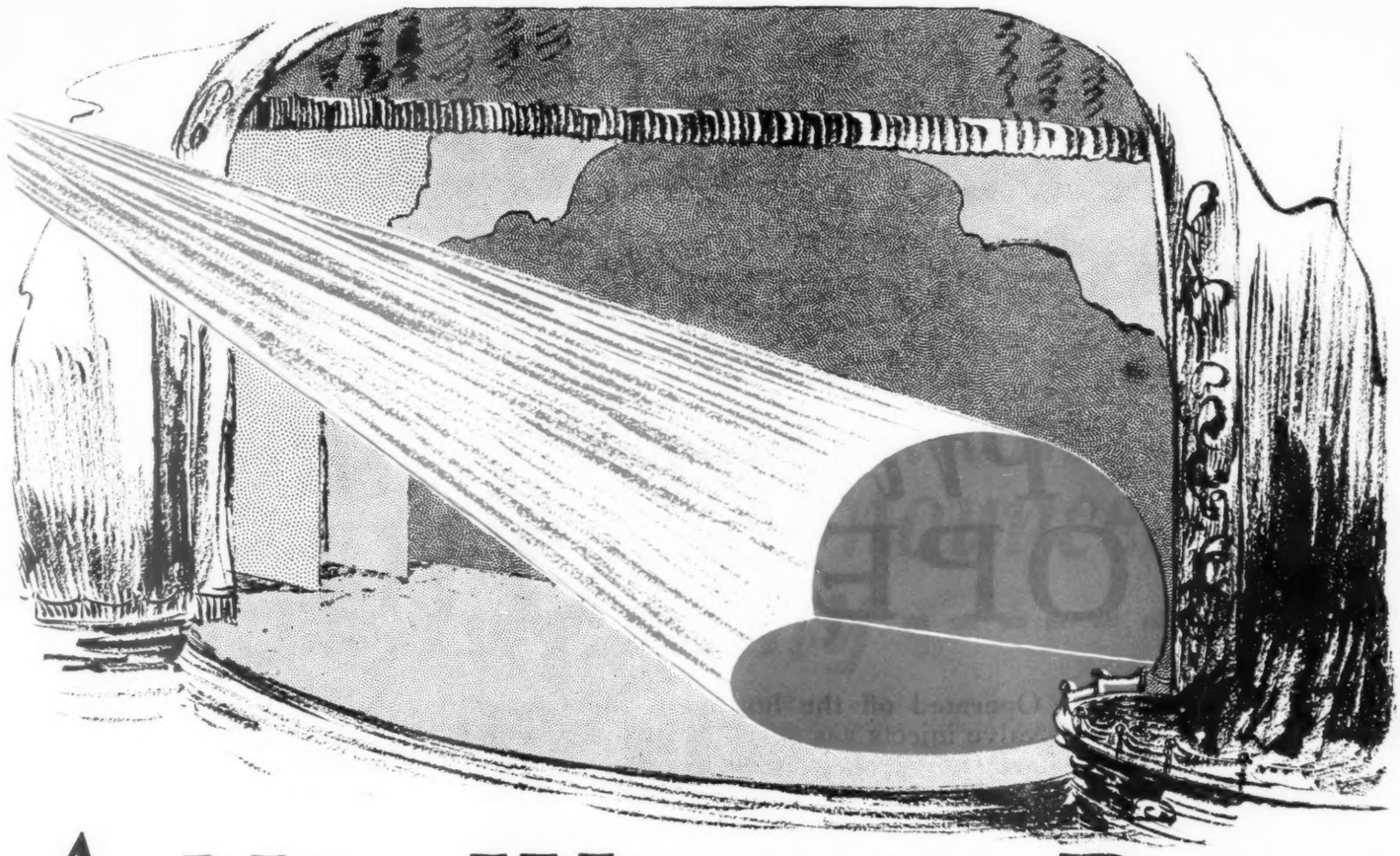
The two wells attracting much attention are in the Island City Field of Owsley County, adjoining Lee and other former productive counties in that part of the State. These two wells are the feature of the week, both being on the J. F. Brewer farm, where several months ago Beattyville parties brought in a gusher which was reported as making 250 bbls. per hour for the first day and close around 75 bbls. an hour during the second day, after which the well stopped flowing, but months after was put on the pump and proved a good producer. This is the well where the Cumberland Pipe Line Co. built a 10-mile extension from its line at Idamay, and since then the original well has been pumping steadily at close around 60 bbls. daily. During July the second well on the south 50 acres of the J. F. Brewer farm, produced an initial of better than 100 bbls., and now No. 3 has been drilled in and estimated at close around 250 bbls. initially. All three wells are owned by the Big Injun Oil Co., and the other new well just in was drilled by the Petroleum Exploration Co., on the other or large acreage of the J F. Brewer farm. It is an offset to the original well on the 50-acre tract, and is showing equally as good as the No. 3 well of the Big Injun company. With four good producers it looks very much as though a rich pool may be opened up, although other wells have been drilled to the south and west, that made very poor showings and the probability is that the better wells will be found to he north and northeast of the present producers.

The Petroleum Exploration Co., as well as the Big Injun Oil Co., is starting additional wells, and the Atlantic Producing Co. is also getting things under way for test work as are several other concerns holding leases in the vicinity. With the four producers now in the pool, it is not like a flash in the pan as some would like to term it, but funny things happens in many parts of Kentucky in the development of oil-producing areas. Much leasing has been done recently in Clay County to the south and some test work is being planned. C. R. Dulin, a well-known operator, is planning some test work on Sexton Creek, in Clay County.

Good Well in Monticello

An unusually good well has been found in the old Monticello Field, in Wayne County, in the Beaver sand on the Burnett farm. It is a slight extension to production and had an initial of 25 bbls., which is far above the usual well of recent years in that county which has been producing for many years and is nearly as old as the old Lima Field of northwestern Ohio. Numerous dry holes are being found in all parts of Kentucky and Tennessee, indicating the spottedness of the territory. Light pumpers are being

(Continued on Page 131)



A *New* WIGGINS ROOF

is coming into the spotlight

Designed particularly

for standing storage

Companion to the Wiggins Floating Roof for working tanks. These two roofs offer evaporation protection for every condition under which oil is stored.

Full announcement in these pages

NEXT WEEK

CHICAGO BRIDGE & IRON WORKS

Chicago—2128 Old Colony Bldg.
New York—3147 Hudson Terminal Bldg.
Cleveland—2204 Union Trust Bldg.
Dallas—1641 Dallas National Bank Bldg.
Atlanta—1054 Healey Bldg.
San Francisco—1054 Rialto Bldg.
Havana, Cuba—Apartado 2507

O&GJ 8-25-Gray

The CLARK

Principle of- OPERATION

Operated off the lay shaft, the Clark Fuel Injector valve injects gas *only* just at the beginning of the compression stroke, under 15 pounds pressure. The complete cycle is as follows: Beginning with the compression stroke when the exhaust ports are practically covered, the gas injection valve is opened for a short period of the stroke, admitting gas only to the cylinder which has previously been scavenged by air ONLY, which enters the cylinder through a separate port. The balance of the stroke is the same as the regular 2-cycle operation. The difference consists mainly in scavenging with air only and injecting the gas just as the piston closes the exhaust ports. NO RAW GAS ESCAPES THROUGH EXHAUST PORTS, AND THE CYLINDER IS COMPLETELY SCAVENGED WITH AIR BEFORE THE GAS IS INJECTED.

The Clark Super 2 Cycle Compressor generates 11 cubic feet per horse power hour, or the equivalent of 4 cycle compressor fuel consumption.

Clark Bros. Co. OLEAN, N.Y.

CLARK BROS. CO

SUPER "2"

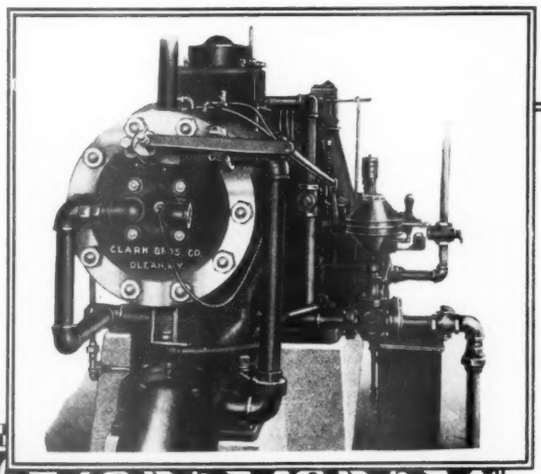
-Cycle Compressor-

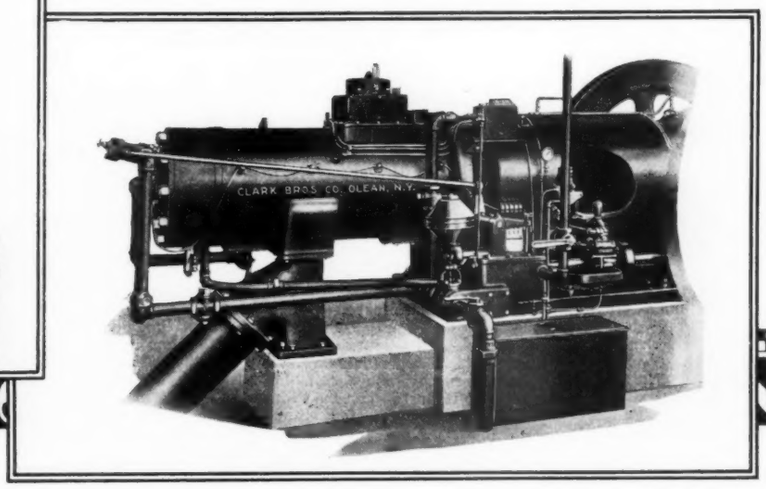
with smoother operation at every stage and Pronounced Fuel Economy -----

So outstanding is this latest Clark miracle—the CLARK SUPER "2"—that the whole army of Petroleum Engineers who have used Clark Compressors in the past and have seen and profited by other Clark successes, view the Super "2" as the climax of Clark achievement. Clark cinched compressor leadership with the best compressor ever built; now Clark outdoes itself in this latest two cycle compressor.

Never before has there ever been a compressor which offers the two cycle principle of operation with its advantages of power and stamina, with the efficiency and economy of a four-cycle engine; never has there been a compressor with the overload capacity; with the smoothness of operation; with the LOW FUEL CONSUMPTION of the CLARK SUPER "2" cycle compressor. See it by all means at the Exposition on September 24th to October 1st; ask our engineers there for the details that explain its low-cost operation. This Super "2" will make compressor history such as the Petroleum Industry has never dreamed possible, and which would NOT be possible except for the ingenuity, and resource, and constant planning and striving and watchfulness that has made the name "Clark," on compressor, drilling and pumping engine, symbolic of service the world over.

For those who care to learn more about this remarkable compressor, before viewing it at the International Petroleum Exposition, we will be glad to send complete details with as much illustrative material as have already been prepared. Comprehensive bulletins will be ready for mailing in the near future. Clark Bros. Company, Olean, N. Y., with Mid-Continent branch and warehouse at 125 W. First St., Tulsa. Warehouses at McCamey and Sweetwater, Texas, and Artesia, N. M. Also Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles and 50 Fremont St., San Francisco, Calif.





MPANY—Olean, N.Y.

Natural Gas Developments

CONSTRUCT GAS LINE TO MONROE, LA., FIELD

MONROE, La., Aug. 20.—The Louisiana-Texas Construction Co., the construction division of the Gas and By-Products Co., announces the start of immediate construction of a 20-inch natural gas pipe line from the Monroe gas fields for the Excelsior Pipe Line Co. The line will transport gas from the wells of the Natural Gas Production Co. of Louisiana, a subsidiary of the Gas & By-Products Co.

There is to be constructed at once 40 miles of 12-inch line from the north end of the Monroe fields toward Pine Bluff, with a 12-inch branch line from the main 20-inch line which will run to Camden, Ark., to furnish gas supply for the new Southern International Paper Co., which is now erecting a $5,000,000 plant at Camden.

The 20-inch line, according to F. M Biddison, manager of the Gas & By-Products Co., is the first section of a 20-inch line that is to link Monroe's gas field with Memphis, as well as the city of Pine Bluff, for municipal supply. The line into Memphis is to be constructed early in 1928, it is said.

MAKING GAS SURVEY FOR ROSWELL SUPPLY

ROSWELL, N. Mex., Aug. 20—Roswell may soon have natural gas from the Maljamar or Artesia Field. Representatives of two public utility companies have recently spent several weeks in this city gathering information regarding the feasibility of bringing natural gas from either the Artesia or Maljamar Field to this city.

The plan of both companies, as now outlined, would bring the gas from one of the oil fields up the valley as far north as Roswell, serving the towns of Artesia, Lake Arthur, Hagerman and Dexter, together with cotton gins and various pumping plants en route.

Gas in the Artesia Field is now being used by the Phillips Petroleum Co. in making casinghead or natural gasoline and then is sent back under pressure to the lease from which it came, leaving it dry and in better condition for usual commercial purposes than when it left the lease.

Since the discovery of gas in the Pecos Valley Field a number of different companies have had under consideration a plan to bring the gas up the valley as far as Roswell and now it seems that some of these plans are about to take definite form.

TO START O. N. G. LINE

Work will start about September 1 on the natural gas pipe line which Oklahoma Natural Gas Co., subsidiary of Phillips Petroleum Co., will lay from the Panhandle Field of Texas to Oklahoma City. Pipe and other material have been ordered. The line from Borger to Norge will be 22 inches in diameter, and from Norge to Oklahoma City two parallel 12-inch lines will be laid. Cost of the project will be $10,000,000.

NEW GAS COMPANY

F. Thomas Knerr, F. R. Lunn and C. E. Ledford of Payne, Paulding County, Ohio, has incorporated The 64 Gas Co., of Payne, formed for the purpose of drilling for and accumulating natural gas and oil, buying and selling gas and oil rights, privileges and leases. The amount of capital with which the company will begin business is $16,000. The maximum number of shares which the company is authorized to have outstanding is 640, all of which shall be without par value.

SOUTHWEST DIVISION TO MEET AT HOUSTON

SHREVEPORT, La., Aug. 20 Announcement has been made here of a meeting of the southwest division of the natural gas department of the American Gas Association to be held in Houston, Tex., October 24 and 25. Arrangements for the program and papers have not been completed, but will be in charge of Harry C. Morris, of Dallas, Tex., chairman of the papers committee. This will be the first divisional meeting since the amalgamation of the Natural Gas Association of America with the American Gas Association.

WEST TEXAS COMPANY AHEAD OF SCHEDULE

AMARILLO, Tex., Aug. 20.—Two months ahead of schodule the West Texas Gas Co. announced the completion of its 15-inch line from Amarillo to Tulia and that it would be tested at once and gas turned in next week at Canyon and to other towns later.

While the 16-inch line from Amarillo to the field is being laid it will draw temporarily on the Amarillo Gas Co. line, the distributor here. Both lines are owned by the Prairie Oil & Gas Co.

The West Texas line was begun in February by A. F. McMahon of Oklahoma City, who then sold to the Prairie which now plans to extend the line on from Lubbock to Midland and possibly farther west.

The 15-inch line as stated has been completed from Amarillo to a point beyond Tulia, county seat of Swisher County, and it will be the next to enjoy natural gas. The 15-inch line goes on to Plainview, where a distribution line is being built. From Plainview to Lubbock the line will be 10¾ inches in diameter, with 8⅝-inch lines from there to Slaton, Lockney and Floydada and 6⅝ inches from Lockney to Floydada. The extra line to Floydada is a loop to augment the supply to Lubbock.

Future plans call for a 10-inch extension south from Lubbock to Lamesa, O'Donnell, Tahoka and on to Midland.

R. F. Hinchey, vice president and general manager of the West Texas Gas Co., said:

"Pending the completion of the 16-inch line from Amarillo to a point west of Deal, in northwestern Potter County, in Section 42 of Block M-20 of G. & M. Survey, and now under way, the West Texas Gas Co. will utilize gas from the Amarillo Gas Co., which gets its supply from the Panhandle Pipe Line Co. A physical connection has already been made north of Amarillo for this auxiliary service."

The West Texas Gas Co. is reported planning an eventual movement of 90,000,000 feet of gas a day through the South Plains line, serving Canyon, Happy, Tulia, Kress, Plainview, Hale Center, Abernathy, Lubbock, Slaton, Lamesa, O'Donnell, Tahoka, Idalou, Lorenzo, Ralls, Crosbyton, Stanton and Midland.

CUERO GAS DELAYED

CUERO, Tex., Aug. 20.—With gas mains practically completed here and many homes connected up, delay over right of way from the intersection of the Yoakum-Gonzales line into Cuero has been occasioned by the refusal of one landowner to permit the company to cross his land. The landowner has been away on a visit and at the last hearing date the case had to be continued for lack of service upon the owner.

KANSAS CITY GAS CO. MAKING EXTENSIONS

The Kansas City Gas Co., the Wyandotte County Gas Co. and the Kansas Natural have under way in Kansas City this summer a construction program involving the expenditure that will amount to close to $1,500,000. This program is already under way in both Kansas Cities and will be completed around January 1, 1928. This is the largest gas construction program that has ever been carried out in Kansas City since the year that natural gas was first introduced into the city in 1907.

The new mains now being laid will take care of the added load which will come into Kansas City when the Kansas Natural's construction program to the Amarillo, Tex., Panhandle Field is finished around January 1, 1928. The program calls for an expenditure of approximately $20,000,000. The line from the Texas Panhandle will practically double the carrying capacity of the Kansas Natural's main lines. It will be built to Wichita, Kans., and there will connect with the company's present large mains coming into Kansas City. Five million dollars is to be spent by the Empire on the enlargement of pipe line and compressor facilities this summer on the existing main lines.

The entrance of the Kansas Natural main lines into Kansas City will be changed and part of the pipe for this work has been unloaded. One line will connect a new 24-inch line that the Kansas City Gas Co. is building and which will run along the south line of Kansas City, Mo., and connect up with the Blue Valley Industrial district extension which was constructed early this summer. The other line will run north along the west side of Kansas City.

GAS FOR GREAT FALLS

CASPER, Wyo., Aug. 20.—No definite announcement has been made in the matter of a gas pipe line from the Kevin-Sunburst area to Great Falls. R. S. Lord of the Hope Engineering Co. of Mount Vernon, Ohio, was a visitor in Great Falls this week in connection with the proposed line. It is understood that a supply of at least 100,000,000 feet a day must be developed before the Hope will undertake construction work. Some significance is attached to the visit at this time of H. C. Bretschneider of the Midwest Refining Co., though Mr. Bretschneider denied any connection between his company and the projected gas line. At the present time there is possibly 85,000,000 feet of gas available for Great Falls consumption.

UNION PARISH GAS LINE

SHREVEPORT, La., Aug. 20.—The Northwest Louisiana Gas Co. of Shreveport has been granted a franchise to distribute natural gas at Farmersville, Union Parish, and work will begin at once on laying the distribution system in that city. To supply the gas the company will lay a 4-inch line a distance of 12 miles to connect with its main line from the Monroe Field to Ruston recently acquired from the Ruston Gas Co.

McLEAN GAS EXTENSION

McLEAN, Texas, Aug. 20.—The McLean Gas Co. is running a new 4-inch line to the Kachelhoffer gas well, 4 miles east of McLean, where the city gas supply is secured. This line is also being extended 11 miles to the northeast to the Terrell well, formerly known as the Henshaw well. Gas service was first given McLean last November and the present owner, H. R. Upham, took charge in February.

OHIO TOWNS GET GAS

Port Clinton, the county seat of Ottawa County, Ohio is to enjoy the pleasure of natural gas for heating and lighting purposes, having granted a five-year franchise to the Ohio Fuel Gas Co., and more than 250 consumers have already signed up. The price is fixed by the company at $1 for the first 500 cubic feet and 60 cents per thousand after the first 500 feet. At the end of the first two years, the price is to be 65 cents per thousand feet over the first 500 cubic feet. A 9-inch main will be laid via Fremont. Genoa, in the western part of the same county and 13 miles southeast of Toledo, is also being connected for natural gas.

DIXIE GAS PURCHASES COMMERCIAL GAS CO.

GALVESTON, Texas, Aug. 20.—Purchase of the Commercial Gas Co. by the Dixie Gas and Utilities Co. for a consideration of about $1,000,000 was announced in a message received here from W. L. Moody, III, in New York. The porperties consist of the pipe line from Waskom to Longview and Tyler and distributing systems in those towns.

The Dixie Co. will extend the line immediately from Tyler to Palestine, Jacksonville and Rusk, in line with its policy to establish natural gas connections in many East Texas towns, Mr. Moody said.

The Dixie Co. has also purchased wells and leases of the Industrial Gas Co. in the Waskom and Greenwood Fields. This property includes the pipe lines in Marshall, where the Dixie Gas Co. owns the distributing system. The consideration was about $500,000.

GAS PIPE LINE SURVEY TO AUSTIN COMPLETED

AUSTIN, Texas, Aug. 20.—Survey of a 14-inch natural gas pipe line from Temple to Austin has been completed by the Lone Star Gas Co.

The Lone Star is one of the three firms which have offered to furnish Austin's gas to be retailed by the People's Utilities Texas Corp. here at 67.5 cents per 1,000 feet plus a 50-cent monthly service charge. F. L. Chase, vice president of the Lone Star Co., recently announced that in case his firm failed to make a contract with the local distributors it will build on toward Austin anyway.

Survey and destination of the size of the pipe line was taken to indicate probable intention to build the line on to Austin. Gas has been promised the users here "before the first of the year."

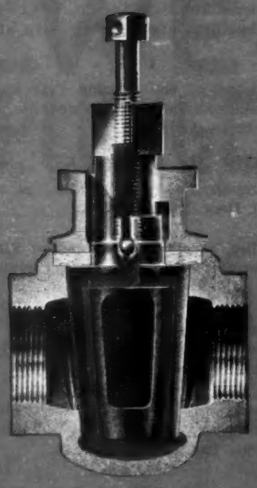
UNVERSITY ROYALTIES

AUSTIN, Texas, Aug. 20.—Oil royalties receivable into the permanent fund of the University of Texas from leases on West Texas lands reached a new high mark when the total for the month of July came to $237,175, with two of the largest companies yet to make returns. The total in the permanent fund to date is $6,620,628. Receipts include $48,544 from the Humble Co., $14,599 from the Peco Oil Co., $78,657 from Big Lake, $7,957 from the Gulf Refining Co., and $29,280 from the Texon Oil Co. The total for last month was $222,000.

NEW GAS SYSTEM

CHATHAM, Ont., Aug. 20.—The Canadian Western Natural Gas Co. is laying service pipes in the town of Stavely, Alta., and will deliver gas to the town about September 15.

MERCO



Revolutionizing valve control

Just a few years ago the lubricated plug valve was unknown. Leaks were tolerated because there was no method of obtaining a positive closure at all times under varying operating conditions. Then Merco Nordstrom Plug Valves were conceived, perfected and tested under every conceivable service. They were enthusiastically accepted. These Valves are serving where others have failed.

The Body is entirely enclosed. The seating surfaces are lubricated under pressure and permit easy turning of the plug under all conditions.

Special Merco lubricant in stick form has been compounded so that regardless of the temperature, contents of the line or pressure a lubricant is available, particularly adapted to the service.

Our Catalog gives complete details.

MERCO NORDSTROM VALVE CO.

SUBSIDIARY OF THE MERRILL COMPANY

Engineers—

San Francisco, 121 Second St.
Chicago, Peoples Gas Building
Cleveland, Ohio, 525 Engineers Building
Western Factory: Oakland, California

MERCO

Manufacturers

New York, 11 W. 42nd St.
Houston, 1315 Petroleum Bldg.
New Orleans, 1501 Masonic Temple Bldg.
Eastern Factory: Belleville, New Jersey

AGENCIES IN PRINCIPAL CITIES

Merco Nordstrom PLUG VALVES

MERCO MERCO MERCO

MEN KNOWN IN OILDOM

Dr. George K. Burgess

As director of the United States Bureau of Standards, Dr. George K. Burgess has charge of the important work of standardizing American products and in creating the highest possible standard for all products made in the United States. The Bureau of Standards aids industry directly or through co-operating committees to determine the best standards of dimension, quality, performance and practice.

Doctor Burgess was born in Newton, Mass., January 4, 1874, and was graduated from the Massachusetts Institute of Technology, in 1896, degree of S. B.; and received the degree of D. Sc. in Paris, 1901. His life has been devoted to science.

Doctor Burgess taught physics at the Massachusetts Institute of Technology and the University of Michigan, and in 1900-01 at the University of California. He became associate physicist of the National University of Standards in Washington, D. C., and in that capacity served from 1903 to 1913. He was physicist and chief of division of metallurgy, 1913; and is now director of the bureau and member of various commissions connected with it. He has been engaged in pyrometric and metallurgical researches.

Doctor Burgess is a member of foreign service and engineering commissions, of the National Research Council, National Academy of Sciences, American Engineering Standards Commission, American Foundrymen's Association (honorary member), American Institute of Mining and Metallurgical Engineers, American Society for Steel Treating (president), Annual Table of Physical Chemistry Constants (American commissioner), International Table of Critical Constants (advisory board), National Advisory Committee for Aeronautics, Optical Society, Philosophical Society of Washington (past president), Washington Academy of Sciences, American Institute of Metals, French Physical Society, Iron and Steel Institute of Great Britian, American Society for Testing Materials (past president), Sigma Xi fraternity, fellow A. A. A. S., and the Cosmos Club.

PERSONAL PARAGRAPHS

E. H. Buckner, president of the Houston Oil Company, is in Colorado.

* * *

T. J. Donoghue, first vice president of The Texas Company, and family are in New York.

* * *

Ralph McFarland, of Houston, Tex., has gone to his old home at Bradford, Pa., for a stay of several weeks.

N. A. Arnold, Newton, Kans., was a recent visitor of the Cooke County Fields, in North Texas, last week.

* * *

J. S. Cullinan, president of the American Republics Corporation, is in the East and will remain until October.

* * *

George Henshaw, San Angelo, Tex., operator, has left for a business and pleasure trip at San Francisco, Calif.

* * *

Joe Simmons, of the Roxana Petroleum Corporation, and headquartered in Gainesville, Tex., was a recent visitor in Ardmore.

* * *

E. A. Shaw, secretary-treasurer of the Peerless Supply Company, of Tulsa, Okla., is spending his vacation at Deer River, Minn.

* * *

H. A. King, vice president of the Sinclair Oil & Gas Company, Houston, Tex., has returned to his desk after a month's vacation.

* * *

Cliff Hackett and Gerald Trangmar of Petrolia, Ontario, left recently for Negritos, Peru, after a four months' furlough in Canada.

* * *

G. R. Henson, chief exploitation engineer of Roxana Petroleum Corporation with Tulsa headquarters, is visiting his family in Colorado.

* * *

L. P. Hammond, Wichita Falls, Tex., operator, is spending several weeks' vacation at the Hammond ranch, near Wagon Mound, N. Mex.

* * *

C. H. Tracy, president of the Tracy Supply Company, has returned to Bowling Green, Ky., from a month's vacation spent in New York.

* * *

S. P. Tschappat, general manager of the Hercules Tool Company, of Tulsa, Okla., has returned from a nine weeks' trip to the eastern fields.

* * *

W. C. Trout, vice president and general manager of the Lufkin Foundry & Machine Company, of Lufkin, Tex., is vacationing in Canada.

* * *

Ernie Richards, formerly with the American Tank Company, has joined the sales department of the National Tank Company, of Tulsa, Okla.

* * *

C. E. Gallman, shop superintendent of the Oil Well Supply Company, at Tulsa, Okla., has just returned from a three weeks' visit to eastern cities.

* * *

Wayne Williams, of the Smith Separator Company, has been transferred from the Gulf Coast region to the McCamey district in West Texas.

* * *

J. K. Kerr, of Marshall, Ill., vice president of the Ohio Oil Company, has been looking over properties of his company in Arkansas and North Louisiana.

* * *

James Webb, of Sarnia, Ontario, sailed via New York, August 18 for Peru, where he will be employed by the International Petroleum Company.

* * *

Hollis Jewell, Vernon, Tex., driller, is recovering from serious injuries suffered several days ago when his car went off an embankment into a deep ditch.

* * *

Ed Owens, of the Wentz Oil Corporation's Eastland, Tex., office, and Leigh Taliaferro, land man for the same company, are visitors in San Angelo, Tex.

* * *

R. J. St. Germain, geologist and well-known oil man of the Mid-Continent territory, is spending two months in Minnesota and Canada on a fishing and hunting trip.

* * *

Clayton Hall, production manager of the George F. Getty, Inc., recently returned to Los Angeles following a fast trip to Artesia, N. Mex., where he superintended work on the Getty well in southeastern Eddy County.

* * *

W. P. Gage, of Dallas, was a recent Houston, Tex., visitor. Mr. Gage is well known among oil and gas men, having been connected officially with the Lone Star Gas Company and more recently with the Pure Oil Company.

C. L. Coppage, director of sales for the California Petroleum Corporation, has just returned to the home office in Los Angeles following an extended business trip abroad.

* * *

R. C. Grinnell, of the Fluid Packed Pump Company, of Los Nitcos, Calif., is visiting the office of the company's Mid-Continent distributor, the Robert N. Atmore Company.

* * *

F. J. Adams, zone agent for the Gulf Production Company, in North and West Texas, with headquarters in Fort Worth, Tex., has returned from a short vacation spent in Colorado.

* * *

M. J. Grogan, vice president of the Louisiana Oil Refining Corporation of Shreveport, La., has been making an inspection of his company's holding in Pontotoc County, Oklahoma.

* * *

W. L. Stratton, general manager of production of the Standard Oil Company of Louisiana, at Shreveport, with his family, is spending a month's vacation at his former home in Maine.

* * *

Charles McKinney, general manager of the Houston Pipe Line Company, the natural gas subsidiary of the Houston Oil Company, has returned from a vacation of several weeks in the North.

* * *

Raymond Doherty, of Houston, Tex., is now with the geological department of the Humble Oil & Refining Company in the Kleberg County Pool. Mr. Doherty is a chemist as well as a geologist.

* * *

H. D. Easton, petroleum geologist of Shreveport, La., has been spending a few days' vacation in the Ozarks at Noel, Mo., motoring there to join his family, who have been spending the summer there.

* * *

Smith W. Day, of Shreveport, La., superintendent of field lines of the Standard Pipe Line Company, motored with his family to his old home at Paterson, N. J., where he will spend a month's vacation.

* * *

A. S. Heck, of Spencer, W. Va., prominent oil producer and banker, spent several days in Pittsburgh, Pa., last week. Mr. Heck, under the name of the Heck Oil Co., is operating successfully in Geary district, Roane County.

* * *

L. M. Conley, despatcher of the Union Transportation Company, of Tulsa, Okla., has left for a vacation which will be spent at his former home at Lima, Ohio. He was formerly superintendent of telegraph for the Ohio Oil Company.

* * *

Joe Ellsbury, chief scout for the Marland Oil Company of Texas, Fort Worth, Tex., has returned from a vacation spent on the Gulf Coast. During his absence the Fort Worth office was in charge of A. C. Galbraith, of the scouting department.

* * *

Fred Bouvier, of the Rycade Petroleum Company, has been transferred from the Houston district to Eagle Pass, Maverick County, as drilling superintendent. The company is drilling three wildcat tests in Maverick County, on the Rio Grande River.

* * *

Edward L. Doheny and a party of officials of the Pan-American Western Petroleum Company, spent some time at San Angelo, Texas, recently consulting with local representatives of the Doheny interests. It was indicated that the company expected to organize a new company in the West Texas Field.

* * *

Capt. C. A. Barbour, who developed the carbon black industry in North Louisiana gas fields, has organized another corporation known as the New Process Carbon Black Company. Captain Barbour also heads the United Oil & Natural Gas Products Corporation and Consolidated Carbon Corporation, operating in Monroe, La., gas fields.

* * *

Secretary Hubert Work of the Department of the Interior, chairman of the Federal Oil Conservation Board, paid a visit to the oil fields of the Big Horn Basin, in Wyoming, recently. He was accompanied through the Oregon Basin, Grass Creek, Buffalo Basin, Hidden Dome, Ennis Creek and other districts by Charles R. Hetzler of the Ohio Oil Company, and Frank D. Coleman of the Montana Power Company.

With 4 Cup and Pipe Extensions

"OILWELL" IMPERIAL PLUNGER PUMPS

"OILWELL" Imperial Plunger Pumps have been giving satisfaction in both domestic and foreign fields for more than 20 years. They are designed and built to meet severe pumping conditions, and can be used with 2, 2½, 3 or 4-inch tubing.

Furnished in lengths from 5-feet 6-inches to 11-feet and with either plain or corrugated plunger, the latter affording a liquid seal which prevents oil slippage.

Simplicity of design is an outstanding feature ---the parts are not complicated and are few in number, and such parts as valve cages, balls, seats, cups and cup rings are "standard".

The Garbutt Rod Attachment is furnished, when desired, which permits pulling the standing valve. Four cup upper or lower plunger extensions can also be furnished and are used to assist the plunger after it has become worn, thereby extending the life of Imperial Plunger Pumps.

Regular

When fine floating sand, salt or other foreign substances are encountered, use

"OILWELL"
Imperial Plunger Pumps

Inquire at any of our 100 Branches

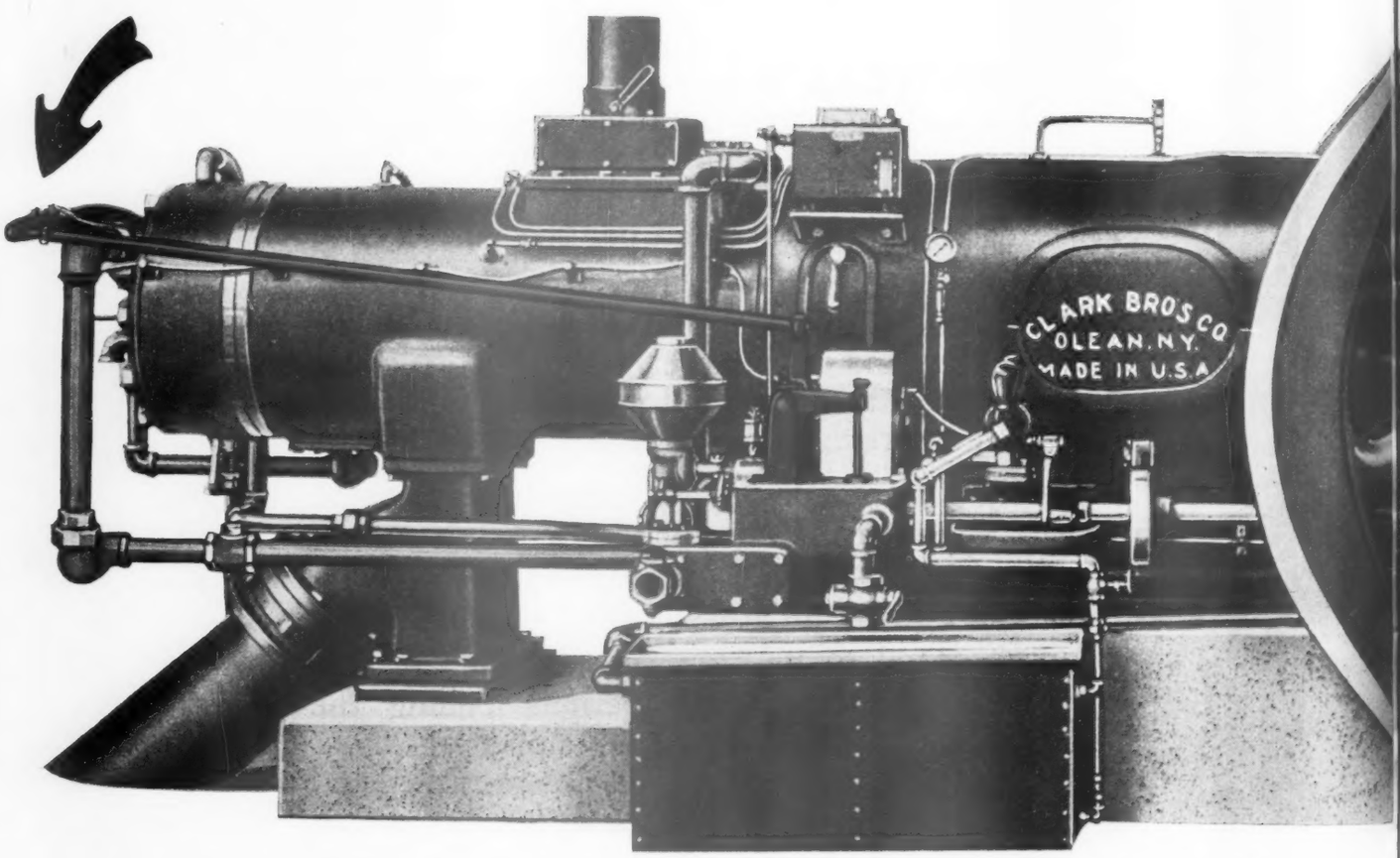
"OILWELL" ESTD 1862 C O TRADE MARK (REGISTERED)

OIL WELL SUPPLY CO.

NEW YORK—LOS ANGELES—PITTSBURGH, U.S.A.—SAN FRANCISCO—TAMPICO—LONDON

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

ANNOU



The CLARK SUPER '2

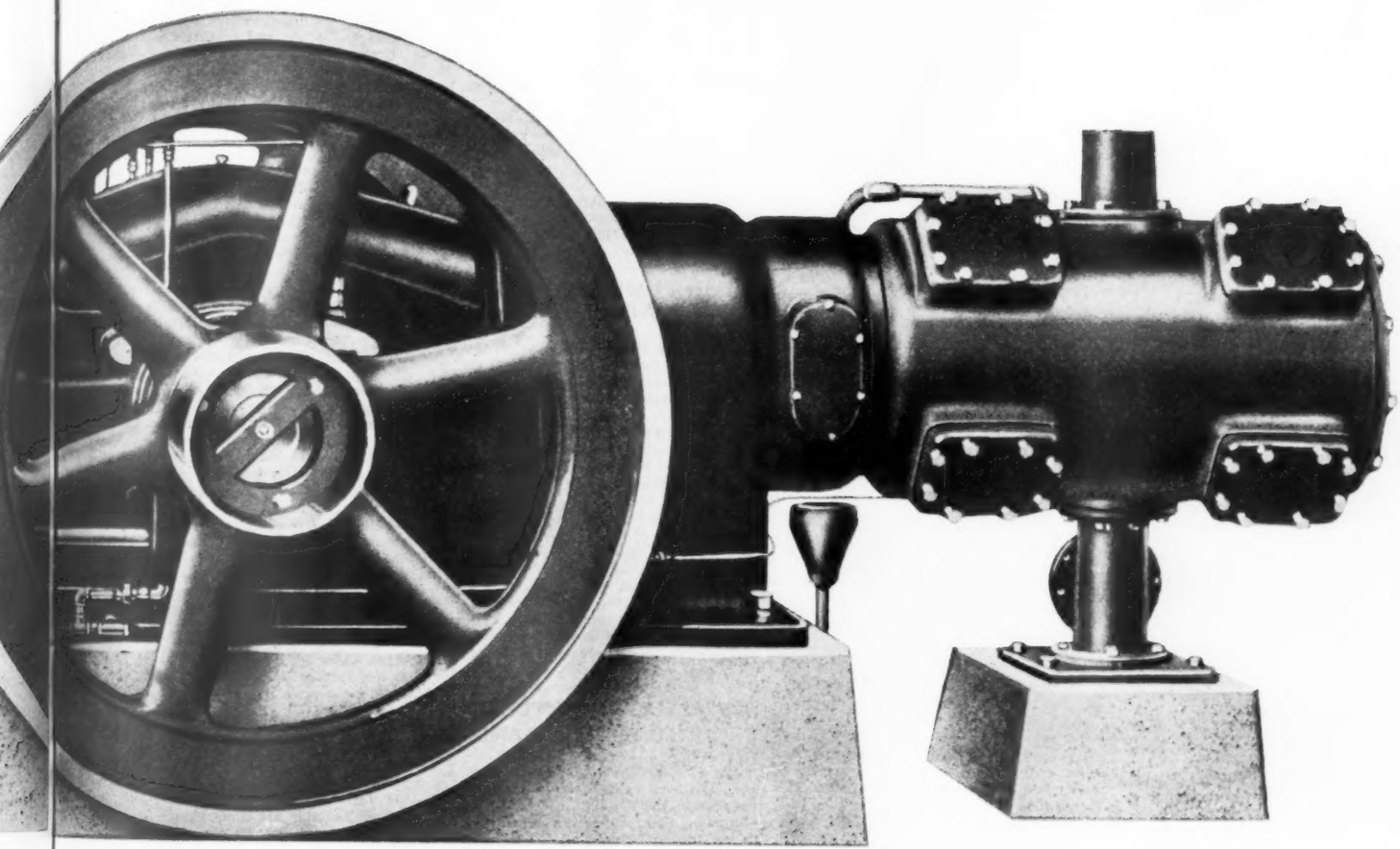
effecting unequalled fuel ec
made possible by the —

CLARK BROS. COMPANY
OLEAN, NEW YORK
or
125 W. First Street,
TULSA

Warehouses at McCamey and Sweetwater, Texas; and Artesia, New Mexico

WRITE FOR ADVANCE INFORMATION DEALING

NCING



CYCLE Compressor

onomy and operating efficiency

CLARK FUEL INJECTOR

or
SMITH BOOTH USHER COMPANY
125 S. Central Ave., Los Angeles
50 Fremont St., San Francisco

WITH ACTUAL TESTS BEGUN OVER A YEAR AGO

EQUIPMENT AND SUPPLIES

TO CORRECT FAULTS IN FURNACE CONSTRUCTION

A material economy in the maintenance and a substantial lengthening of the life of furnace walls is said to be effected by Reintjes Flexible Corner Bonding Tile, which is patented. This tile is described as eliminating all the common faults of corner construction and effects perfect bonding in both side and end wall.

Reintjes Flexible Corner Bonding Tile, it is said, provides ample clearance for expansion at the corners, and also ties gether the side and end walls, preventing the common fault of the front wall falling inward. It can be placed in the side wall at intervals to take care of expansion needs. The expansion joint is provided either by parting of the tile, or clipping with trowel the end of one tile.

The tile is the thickness of one course of brick, and serves as a starting brick for each course. The joints break at each succeeding course and form a perfect corner of the inner 9-inch refractory lining. The tile in each course overlaps the next lower course, to further strengthen the structure. The tile is developed for use when the brick are set in the solid header or quarter bond patterns. Two corner bonding tiles displace three brick and one soap.

PRESSURE REGULATOR FOR VARIABLE DEMANDS

An automatic pressure reducing valve known as the P. & W. type designed especially for the variable demands of vapor, vacuum and low pressure heating systems with extreme sensitivity has been developed by the G. M. Davis Regulator Co., 422 Milwaukee Avenue, Chicago, builders of automatic valve specialties for more than fifty years.

Sensitiveness in this Davis Regulator is accomplished by the simple method of connecting the disc to the diaphragm. Instead of using a stuffing box the steam passes through a bronze bushing which has an easy sliding fit. A slight leakage at this point is not objectionable as it is in the low pressure chamber from which the governing pressure is taken.

Having a flexible fabric insert rubber diaphragm of large area and a frictionless stem, this valve, it is said, gives highly accurate and efficient service in all kinds of low pressure steam circulation where the reduced pressure is low.

CLEVELAND COMPANIES IN NEW CONSOLIDATION

To make possible important economies in marketing their product, six of Cleveland's oldest and best known manufacturers of paint, varnish and lacquers have consolidated their entire holdings and interests, according to announcement made by S. D. Wise, formerly president of the Arco Company and now head of the new organization.

In the consolidation are the Arco Co., Argus Manufacturing Co., Crescent Paint and Manufacturing Co., Eclipse Paint and Manufacturing Co., Iroquois Manufacturing Co. and Sterling Products Co., all of Cleveland. These, with Arco Co., Ltd., Toronto, and Sterling Service Co., Pittsburgh, complete the merger. The new company, which will be known as the Arco Co., is chartered under the laws of Ohio, and has issued 100 000 shares of no-par value stock. A capital investment of about $2,500,000 is said to be represented.

OPENS FACTORY BRANCH

The Highway Trailer Co. of Edgerton, Wis., has opened a factory branch at 420 North Main Street, Tulsa, where a complete stock of highway trailers, winches and parts will be carried. S. W. Bolles is manager of the branch.

DESCRIBES FEATURES IN TONG REFINEMENT

A new refinement in tong design is announced by Wilson & Willard Manufacturing Co. A unique rollover feature has been embodied in Wilson casing and rotary tongs, which will permit reversal

when changing from running in to breaking out, without the necessity of laying the tong on the floor, according to Harry E. Hoffer, assistant general manager.

Heretofore, tongs, to be reversed, have been unhooked and then turned over by the crew. The new rollover feature, according to Mr. Hoffer, provides for the unhooking of one of the turnbuckle bars so that the tong can drop to a vertical position while held in the air by the line and can be rehooked in the reverse position all within 10 seconds.

No change has been made in the jaws of the tongs. To permit the use of the rollover feature the lever, hanger and turnbuckle rods have been redesigned. All of the new tongs will be painted in the new Wilson Chinese red, for immediate identification.

OIL LIFTING MEDIUM IN HYDRAULIC JACKS

Blackhawk Manufacturing Co. announces a line of hydraulic jacks using oil as the lifting medium, a complete line from 1½ to 75 tons.

Since acquiring this line from the Hydraulic Tool Co. of Los Angeles, Blackhawk has made improvements with the result that it is said to have one of the most complete and efficient lines of jacks.

This type jack, the Blackhawk company says, allows operation in cramped places where needed most. And less power and effort are needed in raising load as full stroke of pump is unnecessary —slightest movement of pump handle will raise load. Pump and ball check are built on the outside of jack—easily accessible and do not have to be torn down to get at this ball check unit. The release valve is separate from the pump, preventing accidental lowering and is positive in action. By turning release valve load is automatically lowered fast or slow as desired and easily controlled. It is provided with a by-pass to prevent plunger from being raised beyond safe limits. Heavy duty jacks are equipped with two pumps —one low pressure speed pump to raise plunger quickly to point of contact; one high pressure pump to carry load. Even the heaviest jack is light enough to be carried easily by two men. It can be operated horizontally when pump is on the down side.

FEATURES OF PUMPS DETAILED BY MAKERS

For certain conditions, the D & B Pump Co. claims many advantages for the Simplex Insert pump, one of its products. By placing the plunger bottom valve close to the standing valve on the down stroke, gas locks are said to be eliminated. Instead of allowing the pump space to bank with gas and expanding and contracting this with each stroke of the pump, the gas is picked up with the oil and delivered to the tubing, according to the claims of the makers.

One of the features of the pump is the method used to hold the liner barrel in place at the bottom of the hole. The liner barrel is run in on the rods, the lock sleeve being forced into the lower pump by the pressure of the rod strings; and at the same time the valve rod bushing and seat engages the upper collar and forms a top seal.

SLUSH PUMP SPECIALIST ASSIGNED TO SEMINOLE

The Wilson-Snyder Manufacturing Co., Pittsburgh, Pa., announces that Harry Minard, rotary equipment salesman, who joined its organization to act as factory representative in Seminole and other Oklahoma fields, has just returned to Tulsa after spending some time at the company's works making a study of its long stroke high pressure slush pumps in particular, and also its high pressure hot oil pumps, pipe line and oil transfer pumps.

Mr. Minard will be the Wilson-Snyder slush pump specialist for which position he is described as particularly well fitted because of his long experience and acquaintance with rotary drilling methods and equipment, and is equipped to be of real service to drillers and producers in Oklahoma.

DISTRIBUTING OUTLETS TO BE REORGANIZED

The Sullivan Co. of Memphis, U. S. A., and Montreal, Canada, has announced changes in the distributing outlets of its company, and the installation of additional scientific equipment, as a result of which the price of Konset, the leading product in the line, has been reduced.

The distributing outlets were reorganized as follows: The Texas territory will be served by the Sullivan Co. of Texas, Joe McConnell, president, with offices at Houston. The Oklahoma and Kansas fields will be served by the Sullivan Co. of Oklahoma, H. S. Williams, president, with headquarters at Tulsa. Branch offices at Shreveport, La., Casper, Wyo., and Los Angeles, Calif., will complete the distributing outlets of the company in American oil fields. The Oil Field Equipment Co. of New York will continue as export distributor.

Concurrently with these changes the company announces the introduction of a new product called Slushmix, which is a mud-laden fluid.

LINCOLN ELECTRIC CO. ANNOUNCES CHANGES

The Lincoln Electric Co. announces that the Missouri district office has been moved from 1808 Railway Exchange Building, St. Louis, to 1003 Davidson Building, Kansas City, Robert Notvest being in charge. The St. Louis district will be handled by Mr. Notvest, his time being divided between the two cities.

A branch office has also been established at 220 Nicholas Building, Toledo, Ohio, A. H. Homrighaus, formerly in charge of the Missouri district, having been transferred to Toledo in charge of the district.

NEW ANTIFRICTION BELT CONVEYOR IDLER

Announcement is made by Link-Belt Co., Chicago, of the introduction of an antifriction belt conveyor idler and return rolls of an advanced type of belt conveyor equipment. It is said this equipment embodies many salient features of advantage in design which are the result of years of study and research.

Bearings are Timken tapered roller bearing type, totally encased within the roll hub.

The feature of the idler is the absolute protection afforded by a labyrinth grease seal, mounted in a grease cap which also serves as an outboard reservoir and lubricates the bearing on the outside as well as on the inside, especially when the roll is on an incline. This, in turn, is protected by a deflector plate which deflects dirt, dust, grit or any foreign material away from the bearings and grease seal, and will not, it is said, permit the washing of the grease away from the labyrinth.

The idler rolls are supported in malleable iron brackets having a large bearing surface for supporting them, and they are not dependent upon the use of slots. The brackets are constructed to support the ends of two adjacent rolls, thus obtaining perfect alignment. Roll shafts are supported at both ends close to the rolls, without overhang, thus reducing the bending moment to a minimum. Rolls are spaced far enough apart to permit convenient removal from the frame without the use of any tools.

Idler rolls are made in various standard lengths, and they are furnished in combinations to suit standard belt widths. The end stands are securely riveted to the "T" iron base, and are spread at the foot to present a rigid support for the idler.

The Link-Belt antifriction belt conveyor idlers are made at the Ewart plant of the Link-Belt Co., Indianapolis, in a building especially designed for their manufacture.

TRADE LITERATURE RECEIVED

The Sullivan Machinery Co. announces the following bulletins: No. 83-F describes portable air compressors, gasoline engine driven and electric motor driven types. Bulletin 76-F describes air turbine driven portable hoists both single and double drum. Bulletin 81-N describes the new model clay spaders, light compressed air tools for excavating clay underground or in open trenches.

From Dean-Hill Pump Co., Anderson, Ind., bulletin 1,202 describing the various features of steam turbines particularly adapted for modern central station work where high pressure and temperature steam is used.

From Mine Safety Appliances Co., Pittsburgh, Pa., a folder on the H-H inhalator for resuscitation purposes. The folder describes many performances of the apparatus in reviving persons overcome by fumes and gases.

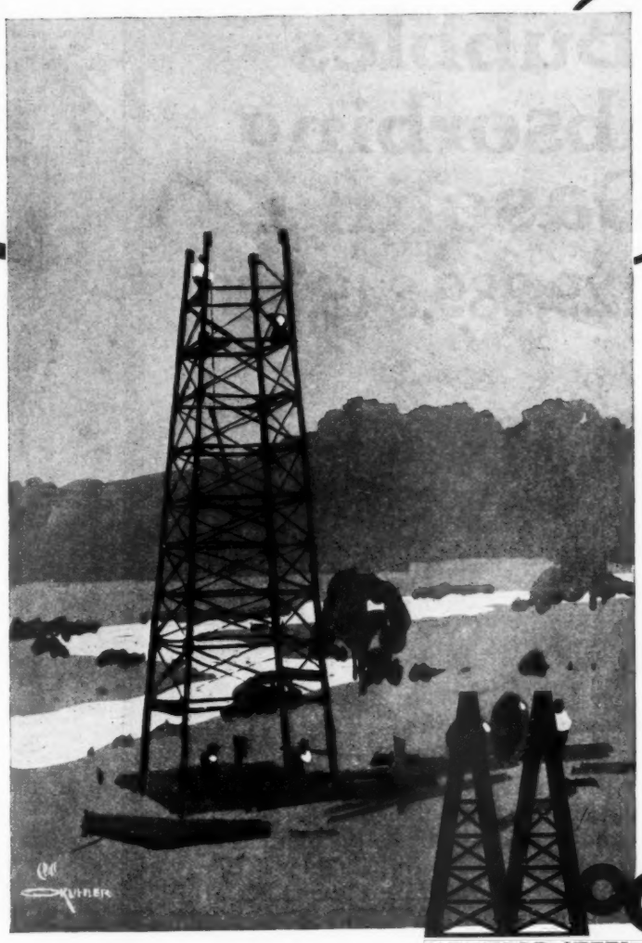
From W-K-M Co., Houston, Tex., a booklet entitled, "How to add years to the life of steel pipe lines." This booklet is very interesting to those concerned with corrosion in pipe lines and its elimination, and gives detailed information on the preventive methods applicable.

From the Iroquois department of the Barber Asphalt Co., a folder describing Iroquois lubricated packed cocks for use in oil refineries and for general chemical purposes.

From the Bristol Co., Waterbury, Conn., electrical catalog No. 1,502, ammeter section. This describes all types of ammeters made by Bristol.

Quickest to Dismantle

World Wide Service for Twenty Years



Moore
TUBULAR STEEL DERRICKS

A Wrench—Common Labor—A Few Hours

THAT is all you need to dismantle a Moore Tubular Steel Derrick. Simply remove the bolts—only one wrench is required—and lower the parts to the ground. Legs, clamps, girts and braces come apart as easily as they are put together. The derrick acts as its own scaffolding. It's the simplicity of Moore construction that makes it quickest to erect and quickest to dismantle.

LEE C. MOORE & COMPANY, *Inc.* PITTSBURGH · TULSA

Established 1907

DALLAS, TEXAS HOUSTON, TEXAS WICHITA FALLS, TEXAS BORGER, TEXAS PARKERSBURG, W. VA.
CASPER, WYO. SHREVEPORT, LA. EL DORADO, KAN. EL DORADO, ARK.

Trillions of Bubbles Absorbing Gasoline

31,129,289,845,840

Figure it out for yourself

In the oil-froth in Campbell Absorbers the maximum size of the bubbles is 1/16-inch. The average size is less. Approximately every five seconds these tiny bubbles break and are reformed. Figuring the bubbles at the maximum size, 1/16-inch, there are theoretically 4,096 per cubic inch; 7,077,888 per cubic foot. It is estimated that the total number of bubbles daily produced in a single Campbell Oil-Froth Absorber is over 32 trillion. Over 600 square feet of oil film is exposed in every cubic foot of bubbles. The most thorough absorption is obtained.

Ask for our new catalog.

J. A. Campbell

Consulting—Designing—Construction

Natural Gas Engineer

P. O. Box 669 LONG BEACH, CALIF.

CAMPBELL

OIL FROTH

absorber

DEVELOPMENT OF THE MEASUREMENT OF NATURAL GAS TOLD BY EXPERT

By John C. Diehl

The accompanying article is the final installment of a series on the measurement of natural gas. The first article appeared in the June 16 issue of The Oil and Gas Journal and the second in the issue of July 28.

Direct Reading Charts

It has been customary for years to read, indicate, and record pressures above the atmospheric pressure. If the pointer or pen of any gauge is set to indicate a reading equal to the value of the atmospheric pressure, when open to the atmosphere, it will indicate or record the absolute pressure when attached to a line.

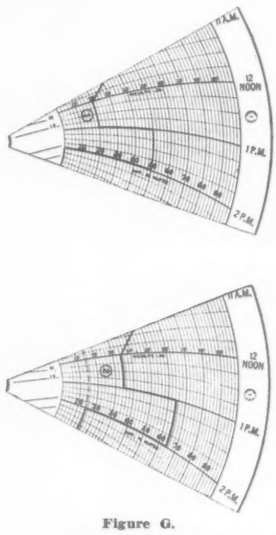


Figure G.

If the atmospheric pressure is 14.4 pounds, the section of chart (1) shows a record of the gauge-pressure, and section (2) shows a record of the absolute pressure for the same period. On section (1) the maximum pressure range is 100 pounds gauge (114.4 pounds absolute), and the zero reading is atmospheric pressure (zero pounds gauge); but in section (2) the maximum range is 100 pounds absolute (85.6 pounds gauge) and the minimum is zero absolute—the atmospheric pressure is indicated by a dotted line.

If the absolute pressure is recorded on an orifice meter chart, the rate of flow varies as the square root of the pressure reading on the chart, as well as the square root of the differential reading.

This figure illustrates sections of three charts from three orifice meters, recording the pressure and differential readings at the same orifice, using the same range of pressure spring and differential gauge in each instrument.

Section (3) contains a record of the gauge pressure and differential as usually recorded on orifice meter charts, section (4) shows the absolute pressure and differtial, and section (5), a direct-reading chart, L-10, on which the differential reading is the square root of the differential and the pressure reading is the square root of the absolute pressure. In this case line six on this chart corresponds to 36 inches differential or 36 pounds absolute, and line one, to 1 inch of differential or a pressure of one pound absolute.

When the direct-reading chart is used, the unit hourly orifice coefficient, U, is the quantity which flows through the orifice when both pen arms record on line one Therefore, on section (5), $U=C\sqrt{hP}=C\sqrt{1\times1}=C$, since line one is 1 inch of differential also one pound absolute.

For any other readings the quantity, Q, per hour is obtained by the formula, $Q=U\ h_u P_u$, in which

U=unit hourly orifice coefficient.

h_u=differential reading on direct-reading charts.

P_u=pressure reading on direct-reading charts.

The calculations for each of the sections may be explained as follows:

The quantity for section (3) for each hour is expressed by the formula,

$Q=C\sqrt{h(p+A)}$, in which

p=gauge pressure

A=atmospheric pressure

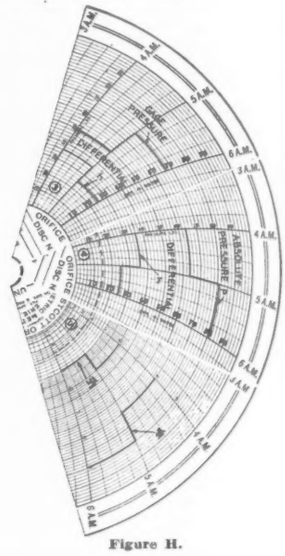


Figure H.

For direct application to section (4), the formula may be simplified to, $Q=C\sqrt{hP}$, as the value of P (the absolute pressure) is obtained directly from the chart. On section (5), $Q=U\ R_b R_p$. If C=500, U=500 in this example.

Section 3 Section 4 Section 5

$Q=\sqrt{h(p+14.4)}$ $=C\sqrt{hP}$ $=U\ h_b P_u$

Time 4 to 5 A. M.

$Q=500\sqrt{36(49.6+14.4)}=500\sqrt{36\times64}=500(6\times8)=24000.$

Time 5 to 6 A. M.

$Q=500\sqrt{25(66.6+14.4)}=500\sqrt{25\times81}=500\ (5\times9)=22500.$

It will be noted that the dotted line indicates the atmospheric pressure reading of the pen arm on each chart. This position on section (3) is on the zero line; on section (4), 14.4; and on section (5), the square root of 14.4.

The L-10 direct-reading type of chart may be used on any instrument regardless of the pressure range or differential range provided the pressure pen is set to indicate the atmospheric pressure at the position it would occupy on a chart of the same absolute pressure range as the spring as shown by sections (7) and (8). Line one is always 1 per cent of the maximum range of the chart. The differential corresponding to line one, therefore, is 1/100 of the maximum differential range of the differential gauge. The absolute pressure corresponding to line one is 1/100 of the maximum absolute pressure range of the spring. U is the coefficient when both pens record on line one, therefore, $U=C\sqrt{0.01\ R_b}\times 0.01\ R_p$, when R_b is the maximum differential range and R_p is the maximum pressure range, $U=0.001\sqrt{R_b R_p}$.

Section (6) shows the record obtained from a 250-pound, 50-inch orifice meter. Section (7) contains the same information except that the absolute pressure is recorded, and section (8) is the record for the same period on a direct reading chart. Since line one on section (8) equals 0.5 inch differential or 2.5 pounds absolute, if $C=500$, $U=500\sqrt{0.5\times2.5}=559$. The same result is obtained by using the formula: $U=0.01C\sqrt{R_b R_p}$ or $U=0.01\times500\sqrt{50\times250}=559$.

The detailed calculations for the three

Saves OIL and GAS

Confines Poison Gas

Run Your Oil-String Through The Casing Oil Saver

The GUIBERSON Casing Oil Saver attaches to the top of well casing and the oil string is run through it, pipe collars passing through readily without permitting escape of oil or gas. It saves oil, conserves gas pressure, keeps derrick floor clean, and protects the men from poison gas.

The Casing Oil Saver is easily assembled around, or removed from, pipe, as all parts are made in two sections. Outlet connections provide for flow of oil and gas. Rubbers are of exceptionally durable composition. Take-up device permits tightening of worn rubbers. Fits any casing by changing adapter. Fits any pipe by changing rubbers. Patented.

"Better Be Safe Than Sorry"

THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas

CALIFORNIA BRANCH: 1506 Santa Fe Ave., Los Angeles

402 W. First St., TULSA
321 S. Osage St., PONCA CITY
506 Trust Bldg., NEWARK, O.

GUIBERSON
BETTER BE SAFE THAN SORRY

ESTABLISHED ~ 1828

ETNA

DISTRIBUTORS:

Bovaird Supply Company
Tulsa, Okla.
Southwest Supply Company
Bartlesville, Okla.
Superior Tube Company
Tulsa, Okla.
Atlas Supply Company
Muskogee, Okla.
Hercules Supply Company
Dallas, Texas
Keystone Pipe & Supply Company
Butler, Pa.
McEwen Bros.
Wellsville, N. Y.
S. R. Bowen Company
Los Angeles, Cal.

The brand ETNA represents the best

IN

WELDED STEEL TUBULAR PRODUCTS

SPANG, CHALFANT & CO., INC.

GENERAL OFFICES, UNION BANK BUILDING

PITTSBURGH, PA.

Branch Offices:

PITTSBURGH, PA. CHICAGO, ILL. NEW YORK, N. Y. ST. LOUIS, MO.

Mills:

ETNA, PA. SHARPSBURG, PA.

sections for simultaneous periods may be expressed as follows:

Section 6 Section 7 Section 8

$Q=C\sqrt{h(P+14.4)}$ $Q=C\sqrt{hP}$ $Q=Uh_bP_a$

Time 8 to 9 A. M.

$Q=500\sqrt{18(235.6+14.4)}=500\sqrt{18\times250}=559\times6\times10=33540.$

Time 9 to 10 A. M.

$Q=500\sqrt{12.5(145.6+14.4}=500\sqrt{12.5\times160}=559\times5\times8=22360.$

Let C=hourly orifice coefficient. It is the quantity which flows an hour at a differential of 1 inch of water at an absolute pressure of one pound per square inch.

R_b=maximum differential range in inches of water, and

R_p=maximum pressure range of the pressure spring; then

$U=C\sqrt{.01\ R_b\times.01_p}=0.01\ C\sqrt{R_bR_p}=CM$

The values of M or $0.01\sqrt{R_bR_p}$, the meter constant, for various differential

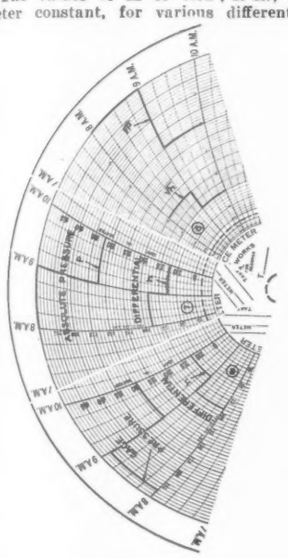


Figure J

and pressure ranges of meters are equal to $\sqrt{hP}$, when h is the differential and P is the absolute pressure represented by line one of the direct reading charts. The values of h and P depend upon the instrument. The values of M are contained in the following table:

METER CONSTANTS FOR L-10 CHARTS

Spring symbol		Pressure range pounds	Differential range of meter 2½-inch	10-inch	20-inch	50-inch	100-inch
M	40	24.7	0.0786	0.1572	0.2223	0 3514	.....
M	50	50	.....	0.2236	0.3162	0.5000	0.7071
M	100	100	.....	.....	0.4472	0.7071	1.000
M	250	250	.....	.....	0.7071	1.118	1.581
M	500	500	.....	.....	1.0000	1.581	2.236
M	1,000	1,000	.....	.....	.....	2.236	3.162

The following examples explain the calculation of the unit orifice coefficient for L-10 direct reading charts.

Example: differential range of meter, 20 inches; pressure range of spring, 24.7 pounds absolute; then U=0.2223 C.

Example: Air flow; 2½ and 8 diameter connections; 4-inch pipe; 2-inch orifice; base and flowing temperature, 60 degrees Fahrenheit; base pressure, 14.4 pounds absolute (0 ounces); then C=1019.4. If a 50-inch, 50-pound meter is used with L-10 charts, then U=1019.4×0.5000=509.7. If h_b=5 and P_a=8, then Q=509.7×5×8=20,388 cubic feet an hour.

Example: Gas flow; 2½ and 8 diameter connections; 4-inch pipe; 2-inch orifice; base and flowing temperature 60 regrees Fahrenheit; base pressure 14.65 pounds absolute (4 ounces); then C=1293.7. If a 100-inch, 100-pound meter is used with L-10 charts, then U=1293.7×1.000=1293.7. If h_b=5 and P_a=6, the Q=1293.7×5×6=38,811 cubic feet an hour.

Atmospheric Pressure Reading.—The atmospheric reading for various ranges of pressure springs is given by the following formula.

Atmospheric position $=10\sqrt{A/R_p}$

A=atmospheric pressure in pounds per square inch.

R_p=pressure range of spring in pounds.

Example: A=12.25. R_p=50, then the atmospheric pressure position $=10\sqrt{12.25/50}=4.95$.

The positions for various pressure ranges of springs corresponding to various atmospheric pressures in pounds per square inch are contained in the following table.

PRESSURE READING AT ATMOSPHERIC PRESSURE

Pressure range Lbls.	Atmos. Pres. lbs. per sq. in. 14.7	14.4	13.4	12.4
24.7	7.71	7.64	7.37	7.08
50	5.42	5.37	5.18	4.98
100	3.83	3.80	3.66	3.52
250	2.43	2.40	2.32	2.23
500	1.71	1.70	1.64	1.57
1,000	1.21	1.20	1.16	1.11

Effect of Atmospheric Pressure on Orifice Meter Measurement

The volume of gas measured is expressed at a certain base pressure which is unusually designated as a certain number of ounces or pounds per square inch. This pressure may be considered to be the gauge pressure above the atmospheric pressure at the point of measurement unless otherwise designated by contract or common understanding.

The general practice has been to consider atmospheric pressure as 14.4 pounds per square inch. While it is true that this value is a represneta ive one for most of the gas fields, gas is being produced in large volumes in locations of high altitude where the pressure of the atmosphere is 11.9 pounds per square inch and even less.

Where the atmospheric pressure is 14.4 pounds per square inch and gas is measured at an 8-ounce base, the total or absolute base pressure in pounds per square inch is 14.4 pounds plus 8 ounces (0.5 pound) or 14.9 pounds per square inch. However, at 11.9 pounds atmospheric pressure, the same 8-ounce base pressure represents an absolu e pressure of 11.9 pounds plus 8 ounces (0.5 pounds) or 12.4 pounds per square inch, so that with temperature conditions similar, the weight of gas in a cubic foot in the first instance is approximately 20 per cent greater than in the second.

For purposes of comparison gas must be calculated on the same absolute base pressure. The Department of the Interior has issued definite instructions in regard to this subject in "Regulations to Govern the Production of Oil and Gas," which provides that all gas produced from lands on which it exercises control must be reported on a base of 10 ounces above an atmospheric pressure of 14.4 pounds per square inch or 15.025 pounds absolute. If it is desired to measure gas at a certain number of ounces or pounds above the atmosphere, the coefficient must be revised to correspond to the desired base pressure.

When it is desired to measure gas at a base pressure above a pressure of 14.4 pounds so that the volume would be equal to that which would occur if the pressure were 14.4 pounds regardless of the atmospheric pressure at point of measurement, then the coefficient should not be revised, on account of the different atmospheric pressure.

The pressure of the atmosphere affects the quantity due to the absolute pressure of the gas being measured. The quantity of gas when measured by an orifice meter is

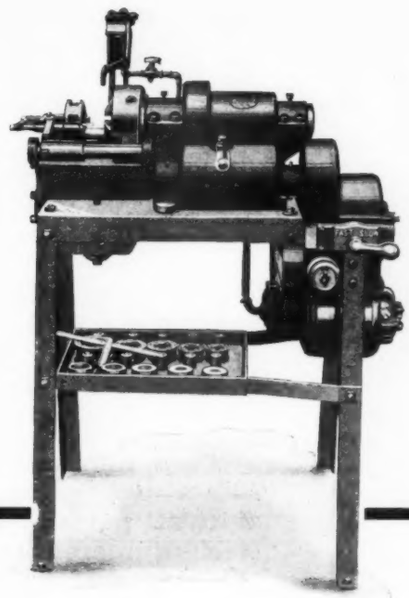
$$Q=C\sqrt{hP}$$

where Q=quantity in cubic feet per hour passing the orifice.

C=hourly orifice coefficient of the orifice. The value of this term is affected by the base pressure and any factor which affects the value of the base pressure in absolute units.

h=differential in inches of water.

P=static or line pressure expressed in pounds per square inch absolute which



FOR SPEED AND ACCURACY IN CUTTING AND THREADING ½" TO 2" PIPE, INSIST ON THE "TOLEDO" NO. 1000 M.

Just 7 seconds to cut off ½" pipe, or 13 seconds to thread; 14 seconds to cut off 2" pipe, or 28 seconds to thread it. Ream it while you are cutting the thread, chamfer it as you cut it off. This is all possible with the "TOLEDO" No. 1000M, the most perfect ½" to 2" pipe machine on the market.

Has instant change from cutting to threading or vice versa and but 10 seconds to change from one size of dies to another. It is equipped with universal motor that will operate from a lamp socket on any 110 volt current. An oil pump insures a constant flow of oil on the dies. Weighs but 460 lbs.

Dozens of owners tell us "It is the finest production unit on the market today," and at the new low net price its outstanding value is emphasized more than ever.

Order one from your dealer and you will find it will pay for itself in a short time.

THE NEW LOW NET PRICE IS

$325.00 (WEST OF ROCKIES $341.25)

F. O. B. Your Dealers Stock

When Results Are Required Insist On

"TOLEDO"

THE TOLEDO PIPE THREADING MACHINE CO. TOLEDO, OHIO

New York Office, 72 Lafayette St.

It's all Lubricator

McCord Force Feed Lubricators

There are no frills in a McCord lubricator. Built for oil field use McCord lubricators are made extra strong to stand up under hard service.

McCord lubricators are built like a high grade automobile with all parts of drop forged steel. Numerous inspections in the course of manufacture along with a rigid final inspection insure long and satisfactory service.

Standard of the Oil Fields

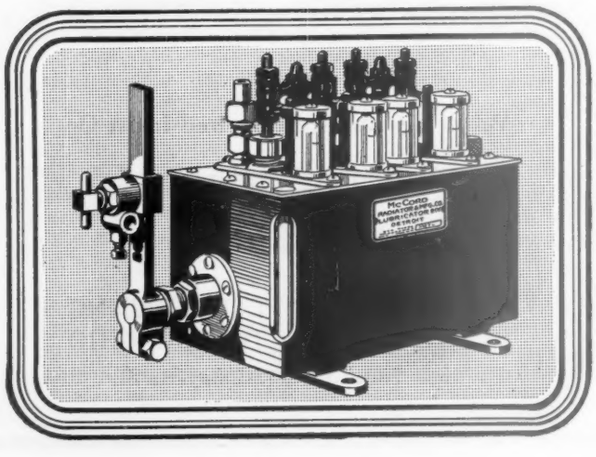
Any pump unit can be removed for inspection or cleaning without disturbing any other unit and the only tool needed is a screw driver.

Is it any wonder no McCord lubricator has ever been known to wear out? That lubricators purchased ten and twelve years ago are still on the job.

Specify McCord lubricat "Standard of the oil fields" your next engine pump compressor.

Ask your National Supply salesman for further details.

McCORD RADIATOR & MFG. CO.
Lubricator Division
DETROIT, MICH.



is the atmospheric pressure plus or minus the gauge pressure.

When orifice meters were first commercially used, the average atmospheric pressure of all the gas fields was 14.4 pounds and this value was used and is still used in the preparation of tables of pressure extensions, which tables give the values of $\sqrt{hP}$ for various values of differential in combination with various pressures. In these tables P is equal to 14.4 plus the gauge pressure, and in cases of vacuum lines, P equals 14.4 minus 0.4908 times inches of mercury vacuum; 14.4 pounds is considered the atmospheric pressure.

It is readily understood that if the atmospheric pressure varies from 14.4 pounds, the volume will be affected. For example: If the gas is flowing under an atmospheric pressure of 11.9 or 2.5 pounds below 14.4 and the static pen rested at zero without any previous adjustment, the pressure on the gas would be equivalent to 5 inches of mercury vacuum below an absolute pressure of 14.4 pounds.

If the tables of pressure extensions are used without any adjustment for change of atmospheric pressure the error in this case is $\sqrt{(14.4+0)h}$, compared with $\sqrt{(11.9+0)h}$ or 3.995h compared with 3.456h, being 10 per cent error. At 125 pounds the error is about 1 per cent. $\sqrt{(14.4+125)h}=11.81h$, and $\sqrt{(11.9+125)h}=11.70h$. At 500 pounds the error is one-fourth per cent. However, under a vacuum the error increases as the vacuum increases. At 20 inches of mercury vacuum the error is 46 per cent.

$$\sqrt{(14.4-0.4908\times20)h}=2.14h$$
$$\sqrt{(11.9-0.4908\times20)h}=1.46h$$

The book of pressure extensions may be used by making adjustments either to the readings or to the static pressure spring. (Special books for high altitudes have been compiled by the Department of the Interior.)

When atmospheric pressure is less than 14.4 pounds make a deduction from the static reading equal to the amount that the atmospheric pressure is less than 14.4 pounds. For example, where the atmospheric pressure is 2.5 pounds less than 14.4 or 11.9 pounds, subtract 2.5 pounds from all pressure readings. When the gauge reading for a period is 20.5 pounds and differential is 30 inches, look up the extension of 20.5—2.5 pounds or 18 pounds and 30 inches water differential. This method may be proved thus:

$$\sqrt{(11.9+20.5)30}=\sqrt{(14.4+18)30}$$
$$\sqrt{32.4\times30}\qquad=\sqrt{32.4\times30}$$

In case of vacuum, add numerically to the gauge reading in inches of mercury, the difference between 29.3 inches mercury (14.4 pounds) and the barometric reading If the barometric reading is 24.3 inches (11.9 pounds) the difference is 5 inches, then if static reading is 20 inches and the differential is 10 inches, to obtain proper volume for the period look up the extension of 20 plus 5 or 25 inches of mercury vacuum and 10 inches differential.

For

$$\sqrt{(11.9-0.4908\times20)10}=$$
$$\sqrt{(14.4-0.4908\times25)10}$$
$$\sqrt{(11.9-9.8)10}=\sqrt{(14.4-12.3)10}$$
$$\sqrt{2.1\times10}=\sqrt{2.1\times10}$$

Adjustments may be made on the gauge to save all office work. When the atmospheric pressure is less than 14.4 pounds, install the meter with the static pen located a space below the zero line equal to the number of pounds that the pressure of the atmosphere is less than 14.4 pounds. Thus, when the atmospheric pressure is 11.9 set the static pen 2.5 pounds below zero when the spring is open to the air. When a pressure acts on the spring and the spring registers zero, the absolute pressure will be 11.9+2.5 or 14.4 which corresponds to the absolute pressure for zero pounds in the pressure extension tables. Where the reading is 10 pounds the absolute pressure registered by the pen is 12.5+11.9 =24.4 pounds per square inch absolute, which is the absolute pressure corresponding to 10 pounds in the Pressure Extension Book. Gauges on vacuum lines are adjusted in a similar manner. If the barometer reading is 24.3 inches (11.9 pounds) which is 5 inches of mercury less than 29.3 inches (14.4 pounds) set the pen at 5 inches of mercury vacuum (below the zero line) when the gauge is installed or when open to the atmosphere. When the chart reading is 20 inches of vacuum the pressure is 15 inches below the atmosphere (24.3 less 15) or 9.3 inches absolute which is the same absolute pressure used in calculating the pressure extension (29.3—20=9.3) except that this value is expressed in pounds in making the calculations. When the atmospheric pressure is greater than 14.4 pounds adjustments are made in the opposite manner. For instance, if the atmospheris pressure is 14.7 pounds add 0.3 pound to the static pressure readings before looking up the extensions. If on a vacuum line subtract 0.6 inch of mercury from the pressure reading before obtaining the extension. If it is desired to have the change made by the pressure pen so as to use the pressure extension tables without any further trouble set the static pen to read 0.3 pound above the zero when the spring is open to the atmosphere.

Do not make revisions to both the readings and the pen but only to the one or the other. When adjustments are made notations should be shown on charts and reports so that checkers may be able to make calculations in proper manner.

From the preceding discussion it will be noted that the effect of the atmospheric pressure on the base pressure, creates a constant percentage deviation on the quantity and the effect on the static pressure is variable. The following examples indicate the varying results which may be obtained from the same data.

Gas is measured with pressure connections at 2½ and 8 diameters from the orifice for a period of 24 hours; size of line, 8 inches; diameter of orifice, 6 inches; base pressure, 4 ounces; specific gravity, 0.600; atmospheric pressure, 12.4 pounds; temperature, 60 degrees Fahrenheit; unrevised hourly coefficient, 16,664; average gauge pressure, 10 pounds; average differential pressure, 16 inches; and pressure pen not adjusted.

(1) Coefficient revised, pressure extensions not revised;

$$Q=24\times16{,}664\frac{(14.4+0.25)}{(12.4+0.25)}\sqrt{(14.4+}$$

$10)16=9{,}152{,}000$ cubic feet a day.

(2) Coefficient and pressure extension revised;

$$Q=24\times16{,}664\frac{(14.4+0.25)}{(12.4+0.25)}\sqrt{(14.4-8)16}$$

$=8{,}768{,}000$ cubic feet a day.

(3) Coefficient not revised, pressure extension not revised:

$Q=24\times16{,}664\sqrt{(14.4+10)16}=7{,}972{,}000$ cubic feet a day.

(4) Coefficient not revised, pressure extension revised:

$Q=24\times16{,}664\sqrt{(14.4+8)16}=7{,}572{,}000$ cubic feet a day.

Whether method (2) or (4) should be applied depends upon the contract.

ORIFICE METERS

Pressure Connections or Taps

When the main taps are made at points 2½ diameters upstream and 8 diameters downstream from the orifice, these connections are called full-flow connections and quite frequently are known as pipe taps. When the taps for the pressure connections are made close to the orifice, through the flanges, the taps are called flange taps. In the 2½ and 8-diameter or pipe tap installation, the connections are made at points where the stream line flow occupies the full section of the pipe, hence the descriptive term full-flow connections. These points

(Continued on Page 181)

WESTCOTT VALVES

for AIR-LIFT Service

Air and Gas Lift, as applied to oil production, is attracting the attention of the entire industry, at this time. For air and gas lift service, reliable high pressure valves are required. WESTCOTTS have been in demand for this work from the start.

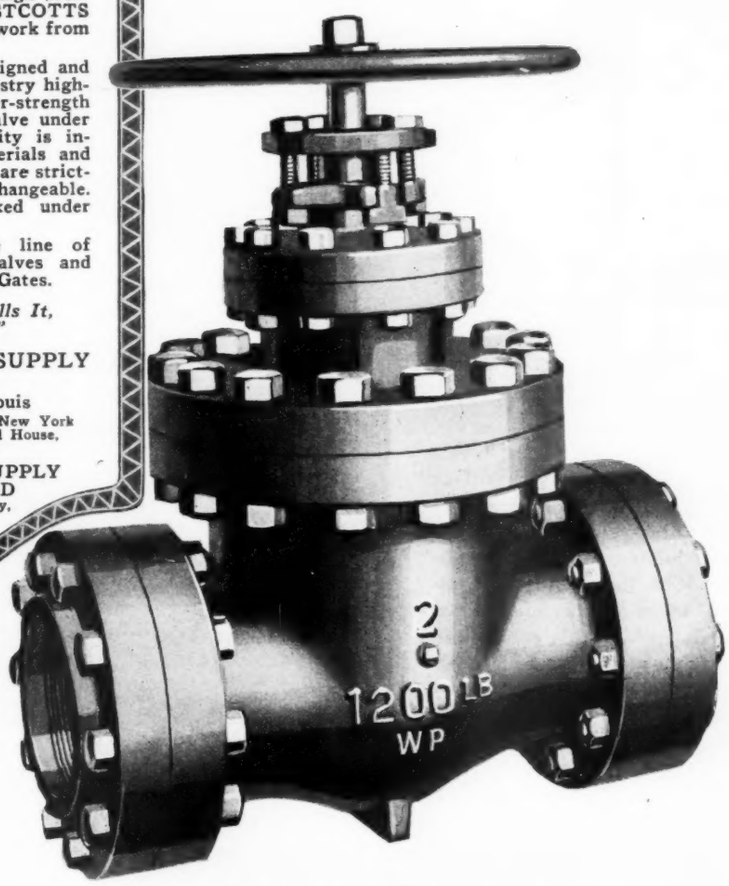
WESTCOTT Valves are designed and built *exclusively* for Oil Industry high-pressure service. Great over-strength is insured by testing each valve under hydraulic pressure. Durability is insured by highest grade materials and full bronze mountings. Parts are strictly standardized and interchangeable. WESTCOTTS can be packed under pressure.

We also offer a complete line of WESTCOTT Pipe Line Valves and high pressure Steel Drilling Gates.

"If CONTINENTAL Sells It, There Is No Better"

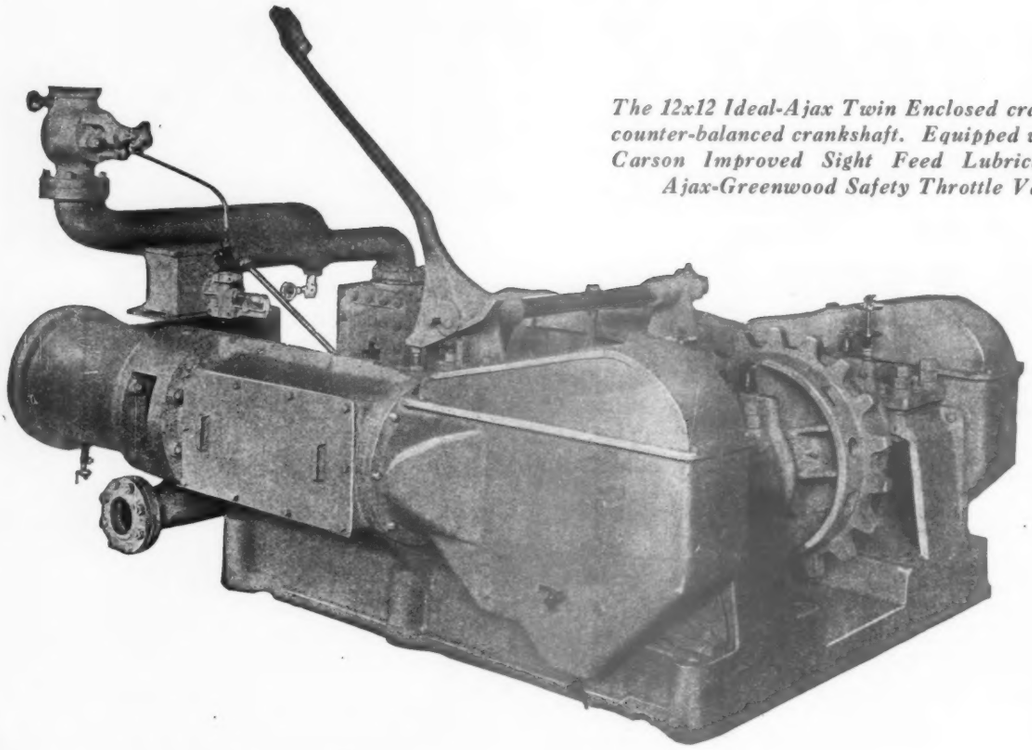
THE CONTINENTAL SUPPLY COMPANY
General Offices: St. Louis
Export Office: 74 Trinity Court, New York
London Office: 316-317 Dashwood House, Old Broad St., E. C. 2

THE CONTINENTAL SUPPLY COMPANY, LIMITED
69 Thomas Block, Calgary, Alberta, Canada



CONTINENTAL

It's RESULTS - - -



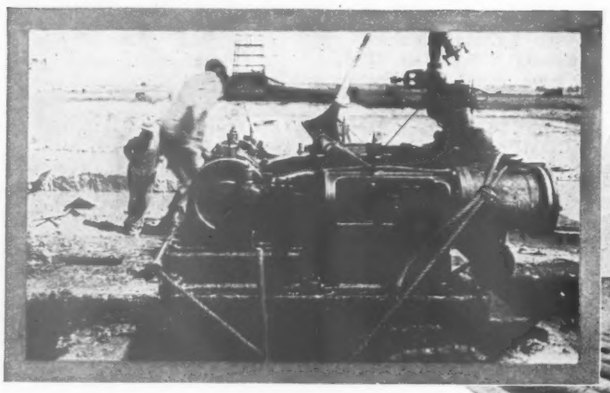
The 12x12 Ideal-Ajax Twin Enclosed crankcase—counter-balanced crankshaft. Equipped with Ajax Carson Improved Sight Feed Lubricator and Ajax-Greenwood Safety Throttle Valve.

AJAX Snap Shots

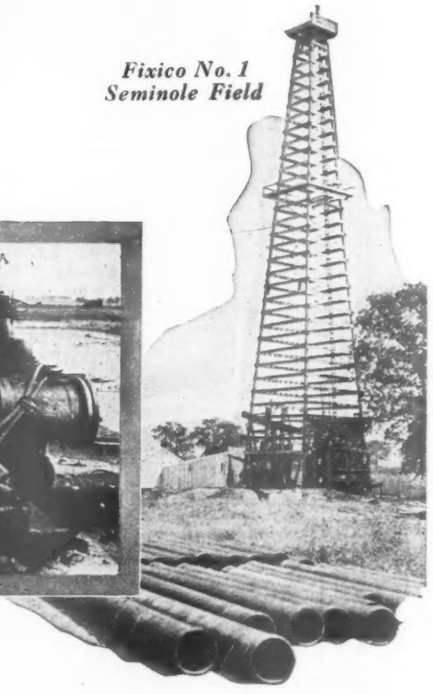
3,000 Ft. in 20 days

This is the record made by the Reece Drilling Co. with a 10x10 Ideal-Ajax Twin on the Independent Oil & Gas Co.'s Fixico No. 1 Seminole Field, which came in for an initial production of 5,560 barrels. From 3640' the well was completed by a 12x12 Ideal-Ajax. Records such as this are behind the selection of Ajax and Ideal-Ajax Steam Drilling Engines by experienced oil men everywhere.

Setting up the 10x10 Ideal-Ajax for its twentieth well.



Fixico No. 1 Seminole Field



IDEAL DRILLING

- - - that Count!

The well completed at the earliest date is what the owner wants. Lower operating cost is what the driller demands. Both are results—results of *faster drilling*.

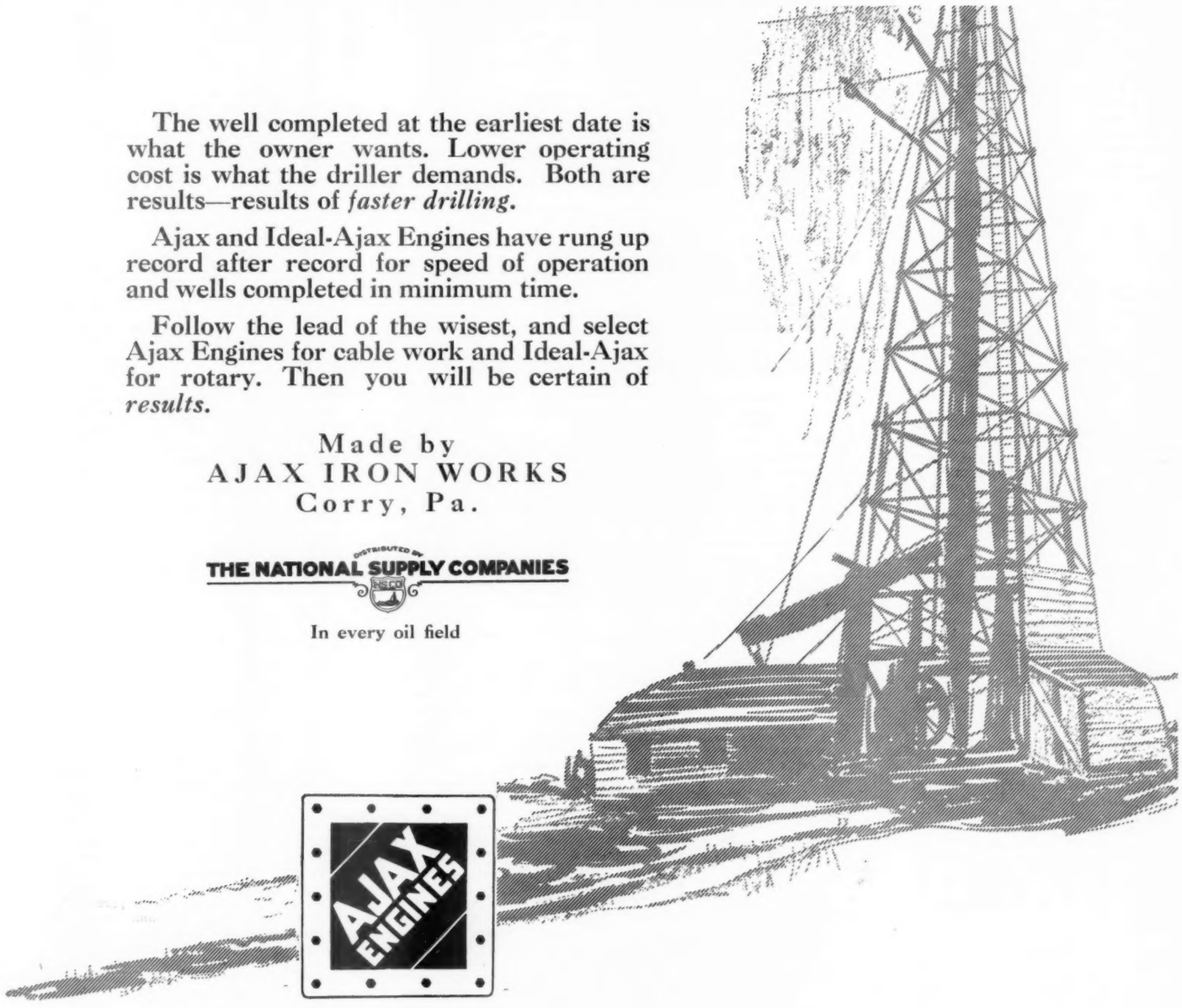
Ajax and Ideal-Ajax Engines have rung up record after record for speed of operation and wells completed in minimum time.

Follow the lead of the wisest, and select Ajax Engines for cable work and Ideal-Ajax for rotary. Then you will be certain of *results*.

Made by
AJAX IRON WORKS
Corry, Pa.

DISTRIBUTED BY
THE NATIONAL SUPPLY COMPANIES
NSCO

In every oil field



- AJAX ENGINES

Survey of Refineries in Foreign Countries

SPAIN

From report by Commercial Attache Charles H. Cunningham, Madrid.

Until 1920 the Spanish customs duty on gasoline amounted to 30 pesetas per 100 kilos. In order to avoid payment of this relatively high tariff a number of firms established "refineries" in Spain ostensibly for the purpose of importing crude petroleum and refining it, the tariff on crude oil being much lower than on gasoline. What these firms actually imported, however, was a product which became known to the American petroleum trade as "Spanish crude," a specially prepared product from which, by mere distillation, a very high percentage of gasoline could be obtained.

In 1921 the duty on gasoline was lowered to 10 pesetas per 100 kilos, and, though raised again to 15 pesetas in 1922, it was no longer profitable for the so-called refineries to continue "refining" the Spanish crude. Since that time, therefore, their plants have been used almost exclusively for the storage of imported finished products. Many of these plants are still referred to as refineries, though in reality no refining whatever is done there.

There are four concerns in Spain actually engaged in refining oil of one kind or another. While for various reasons it has not been possible to obtain complete data as to their relative capacities, sources of raw material, etc., the following information is available:

Sabadell & Henry, S. A.—This company operates a small refinery at Hospitaled de Llobregat, about 9 miles from Barcelona. It handles exclusively, it is believed, topped crude oils from Venezuela and Texas, manufacturing for the most part certain lubricating oils.

Sociedad Anonima de Lubrificantes—Operates a small plant in Pratvermell, Barcelona City. This company is a subsidiary of the French firm Andre Fils, manufacturing finished products from topped crude.

Industrias Babel & Nervion.—With an installation in Zorroza, Bilbao, this firm is said to refine lubricating oils. The company is closely associated with the Societe Bedford Iberique, of Paris (Standard Oil Co.), and the lubricating oils manufactured by it are sold to the trade exclusively through the latter company's organization.

La Comercial Industrial Espanola.—A small firm with an installation in Barcelona, where a limited quantity of gas oil, purchased locally, is refined in the production of two or three grades of lubricating oils.

EGYPT

From report by Commercial Attache James F. Hodgson, Alexandria

There are two refineries in Egypt, both located at Suez. One is owned by the Egyptian Government and the other by the Anglo-Egyptian Oilfields, Ltd., an English company in which the Asiatic Petroleum Co. is interested. Both refineries have modern equipment.

The Anglo-Egyptian Oilfields, Ltd., has several oil wells along the coast of the Red Sea. They also have a fleet of tankers and import crude oil from Persia, Rumania, Borneo and other points. The Government secures its supply of crude oil in part from the royalties exacted from the Anglo-Egyptian Oilfields, Ltd. It also conducts drilling operations on a small scale.

The products manufactured at these plants are gasoline, kerosene, mazout (fuel oil), Diesel oil, lubricating oils (low grade), and a few of the usual by-products.

The Government expects to refine about 11,400 tons of crude oil during the present fiscal year. It has been impossible, however, to secure any accurate figures regarding the capacity of the plant of the Anglo-Egyptian Oilfields, though their crude-oil consumption is known to be considerably larger than that of the government refinery.

COMPLETE LIST OF FOREIGN REFINERIES

In this issue The Oil and Gas Journal completes the publication of a survey of petroleum refining in foreign countries. This survey was compiled by the Bureau of Foreign and Domestic Commerce, United States Department of Commerce. It was based on reports of consular officers of the Department of State and overseas representatives of the Department of Commerce.

The report has been published in five issues of The Oil and Gas Journal as follows:

July 21 issue, page 153: Canada, Mexico, Cuba, Porto Rico and Dutch West Indies.

July 28 issue, page 78: Trinidad, Argentina, Colombia, Ecuador, Peru, Austria and Belgium.

August 11 issue, page 78: Czechoslovakia, France, Germany and Great Britain.

August 18 issue, page 80: Hungary, Italy, Latvia, Norway, Poland, Rumania, Russia and Yugoslavia.

This issue: Spain, Egypt, Persia, India, East Indies, Japan and Australia.

The several reports give a list of plants by countries including data regarding plant operations. In several of the reports market conditions in regard to crude oil and refined products are also discussed.

PERSIA

From report by Consul Orsen N. Nielsen, Teheran

The following information is based upon data furnished by the Anglo-Persian Oil Co., Ltd., the sole company operating a refinery in Persia. This refinery is located at Abadan, on the Persian Gulf. The plant equipment is modern and the source of crude petroleum lies in the district around Masjid-i-Sulaiman, in southwest Persia. The products are kerosene, benzine, and fuel oils, the total output of refined products for the fiscal year ending March 31, 1926, being 2,950,000 tons.

The Khanaquin Oil Co., Ltd., a subsidiary of the Anglo-Persian Oil Co., Ltd., has erected a small refinery at Khanikin, close to the Persian-Irak border. No details of the plant equipment or capacity are available at this time.

INDIA

From report by Trade Commissioner Charles B. Spofford, Jr., Calcutta

The following information pertains to oil refineries in Burma, and has been obtained by personal interviews with responsible individuals, whose statements, while unofficial, may be regarded as fairly reliable. Official statistics on petroleum refineries in Burma and India are unobtainable.

There are only four petroleum refineries in Burma and one of these, belonging to the United Oil Refineries, Ltd., has never been operated.

The largest refinery in Burma is located at Syrium and is owned by the Burma Oil Co. Its stated capacity is 20,000 bbls. a day, though 25,000 bbls. a day would probably be a conservative estimate of its full capacity. The plant equipment is of the latest design. The quantity of crude petroleum now being run through the plant is approximately 16,000 to 18,000 bbls. a day. It is believed that the reason this plant has a capacity in excess of actual requirements lies in the fact that the Burma Oil Co. is closely associated with the Ang'o-Persian Oil Co., and should their Persian refinery at Abadan break down it would be possible and desirable to ship crude oil to Rangoon to be refined.

The Burma Oil Co. obtains its crude petroleum from fields in Upper Burma. This company now holds an area under mining lease in Burma of about 50 square miles and one under a prospecting license of about 62 square miles. The number of wells drilled is over 1,500, with more than 1,000 in actual operation. The principal producing area of the Burma Oil Co. is the Yenangyoung Field on the Irrawady River, 250 miles north of Rangoon. This field is electrically operated with the most modern equipment. Besides the drilling of over 1,000 wells in Yenangyoung, the neighboring fields of Yenangyat, Singu, Minbu, Palanyou, and Yethawa, have been opened up, varying in size from 100 wells in Minbu to some 200 in Singu. The daily crude-oil output of all the Burma Oil Co.'s fields in Burma is about 14,000 bbls. This is pumped to the Rangoon refinery through a 10-inch pipe line 275 miles long, a series of six pumping stations being located at Singu, Nyoungha'a, Kanhla, Thegon, Tharrawaddy, and Kyoukchoung. The Burma Oil Co. manufactures kerosene, gasoline, lubricating oils, greases, wax, and candles.

The second largest refinery in Burma is located at Thilwa and is owned by the Indo-Burma Petroleum Co., Ltd. This plant is very old. Intermittent repairs have been made, with occasional installations of new stills. The company obtains its crude petroleum from the Yenangyoung and Singu oil fields, having a crude-oil production amounting to approximately one-tenth that of the Burma Oil Co. Products manufactured include kerosene, gasoline, lubricating oils, greases, wax, and candles. The approximate capacity of their refinery is 3,000 bbls. per day, the plant being operated at full capacity. No new refinery installation is contemplated, although new equipment is occasionally purchased, as required for replacement.

The British Burma Petroleum Co., Ltd., has a refinery at Seikkyga. The plant is old and consists largely of an old installation purchased from the Burma Oil Co., which had been used in a refinery at Danidaw. Crude petroleum is obtained from the Yenangkyoung and Singu Fields. The products manufactured include kerosene, gasoline, lubricating oils, greases, wax, and candles. The capacity of the refinery is approximately 2,500 bbls. a day. The British Burma Co. sell its refined products through and under the name of the Burma Oil Co. It is therefore impossible to know which of the two companies has actually manufactured the products sold by the Burma Oil Co. No changes in plant equipment are contemplated. There have been persistent rumors, however, that the British Burma will be absorbed by the Burma Oil Co.

The United Oil Refineries, Ltd., a company controlled by Indian capital, has constructed a refinery at Rangoon. The equipment here is new, but as it has never been used it is now falling into a state of disrepair. With a capacity of 2,000 bbls. per day the plant has never been able to operate, owing to the lack of a crude oil supply. While the plant is said to have cost £250,000, it is believed that the entire installation could be purchased today for approximately £10,000.

EAST INDIES

From reports by Assistant Trade Commissioner Don C. Bliss, Batavia; Consul John H. Bruins, Singapore; and Consul C. Porter Kuykendall, Batavia.

The 11 refineries and 1 topping plant in the East Indies are distributed as follows: 5 refineries in Sumatra, 4 in Java, 2 in Borneo, and the topping plant located on the island of Ceram, one of the smaller islands of the group farther to the east. One of the two refineries in Borneo is located at Miri, in the State of Sarawak, an independent state under British protection. This refinery is operated by the Sarawak Oilfields, Ltd., a subsidiary of the Royal Dutch.

The Bataafsche Petroleum Maatschappij (hereafter referred to as the Batavian Co.), also a subsidiary of the Royal Dutch, either operates or controls seven of these refineries—four in Sumatra, two in Java, and the refinery at Balikpapan, in Dutch East Borneo, this latter being by far the largest refinery in the East Indies. The topping plant at Boela Bay, on the island of Ceram, is likewise controlled by the Batavian Co. The Royal Dutch group therefore contro's 8 of the 11 refineries in the East Indies, 7 in Dutch territory, and 1 in the British protectorate of Sarawak, in Borneo, as well as the topping plant on Ceram.

Two of the three remaining refineries, one recently completed at Soenei-Gerong, near Palembang in southern Sumatra, and a small refinery at Kapoean in the Samarang district in east central Java, are owned by the Nederlandsche Koloniale Petroleum Maatschappij (hereafter referred to as the Dutch Colonial Co.). The last of the East Indies refineries, located at Klantoeng, near the Klantoeng-Sorjomerto concessions in Java, is owned by the Algemeene Petroleum Co.

In each case the crude petroleum handled by the foregoing refineries is obtained from concessions located in the general vicinity of the refinery, the producing wells and refinery being operated by the same controlling interests. Gasoline, kerosene, terpene, fuel oil, asphalt, lubricating oils, and greases, as well as paraffin, are obtained from the various refineries in the East Indies. There is, however, considerable variation in the quality of the crude oil produced on the different islands. Nearly all of the Sumatra crude oils are especially rich in light products and, generally speaking, contain little or no paraffin. The Borneo crude oils vary considerably in composition, even in the same field. The Java oil yields, as a rule, little benzine. Some crude oils do not contain even kerosene; others are of a strong paraffin base. The factories at Java and Borneo put a large quantity of the finest paraffin wax on the market. A large part of the wax is used for candles, which, on account of the high melting point of Borneo paraffin, are particularly suitable for use in the Tropics.

Further details concerning the refineries on each of the various islands in the East Indies follow:

Sumatra

Two of the five refineries in Sumatra are located along the northeast coast and toward the northern end of the island, one at Perlak, on Cape Peureula, in the Atjeh Residency, and the other at Pangkalan Brandan in the Oostkust Residency, further to the south. At Perlak, the Batavian Co. owns a complete plant for the distillation and refining of gasoline. This plant is connected with the refinery at Pangkalan Brandan by 6-inch and 10-inch pipe lines, about 70 miles long.

The refinery at Pangkalan Brandan, likewise owned by the Batavian Co., is the largest in Sumatra. It is on the Babalan River, about 13 miles from Pang-

(Continued on Page 188)

EXPORTS OF PRODUCTS OF BURMESE REFINERIES

Product—		1923	1924	1925
Gasoline	imperial gallons..	31,916,225	38,045,198	32,761,958
Kerosene	imperial gallons..	131,969,688	128,990,768	124,831,568
Batching oils	barrels..	88,746	100,445	86,503
Lubricating oil	barrels..	57,302	76,943	75,746
Grease	barrels..	3,487	5,173	2,892
Wax and candles	long tons..	30,210	35,268	35,464

ALLIS-CHALMERS

Oil Well Units

Complete Unit designed after exhaustive study of oil well requirements.

Speed Ratio changed in a few minutes at slight cost.

Complete Unit, including motor and controller furnished on one order with undivided responsibility.

Immediate Shipment from Tulsa or Houston Stocks

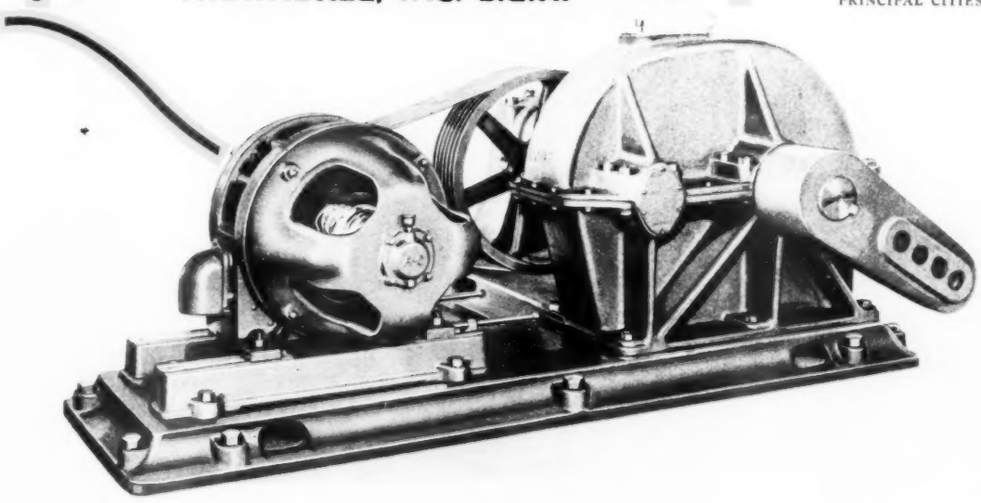
REQUEST BULLETIN 1232

ALLIS-CHALMERS MANUFACTURING CO.
MILWAUKEE, WIS. U.S.A.

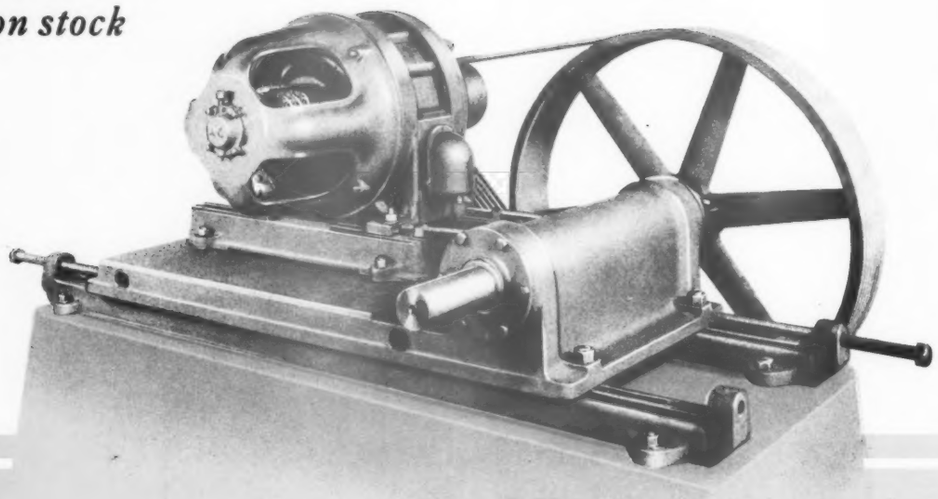
ALLIS-CHALMERS DISTRICT OFFICES:

DALLAS
DENVER
EL PASO
HOUSTON
KANSAS CITY
LOS ANGELES
NEW ORLEANS
SAN FRANCISCO

AND ALL OTHER PRINCIPAL CITIES



Immediate Shipment from Tulsa and Houston stock



Texrope
Belt-Tightening Countershafts

This unit has take-up enough to eliminate belt clamps.

Timken tapered roller bearings on motor and countershaft, grease lubricated, reduce shut-downs.

At low cost, pumping speed can be changed in a few minutes to suit well conditions.

REQUEST BULLETIN 1231

ALLIS-CHALMERS MANUFACTURING CO.
MILWAUKEE, WIS. U.S.A.

TEXAS GROSS PRODUCTION REPORT FOR SECOND QUARTER OF THIS YEAR

The low price of crude oil was reflected impressively in the reports of gross production filed with the state auditor of Texas, for taxation purposes, for the second quarter of this year. While the gross production of crude for the State, as covered by the reports filed, showed a decrease of only 161,202 bbls. as compared to the first quarter of this year, the value of the production during the second quarter was $16,972,111.38 less than the value for the first quarter. The report, as compiled from records in the office of the state auditor at Austin, shows a gross production during the second quarter of 50,917,225.7 bbls. with a va'ue of $58,661,742.04, as compared to a production of 51,078,427 bbls. and a value of $75,633,853.42 during the first quarter. The report for the second quarter follows:

A

Name and Address—	Barrels	Value
Apple-Brandeberry Oil Co. et al, Wichita Falls	14,683.34	$ 20,004.24
Atkinson & Sandefer, Breckenridge	14,955.93	20,010.99
Amicable Life Insurance Co., Waco	230.00	334.60
Amster, N. L. (March 31), Ardmore, Okla.	1,183.06	1,824.14
Anna Belle Oil Co., Dallas	5,452.45	7,634.43
Ardcona Oil Corp., Ardmore, Okla.	1,571.25	1,964.06
Atlantic Keystone Petroleum Co., Inc., New York	1,798.37	1,769.06
Atlantic Keystone Petroleum Co. (3-31-27), New York	2,218.21	2,687.55
Atlantic Oil Producing Co., Dallas	704,083.37	831,327.13
Ada Belle Oil Co., Batson	26,064.42	31,305.17
American Well & Prospecting Co., Corsicana	45,037.43	45,037.43
Andrews, W. E., et al, Putnam	2,379.34	7,462.71
Agate Bros., Eastland	165.00	202.60
Apex Oil Corp., Amarillo	44,331.00	44,784.59
Abercrombie, J. C., Co., Houston	84,474.43	98,923.52
Ailes, J. W., Wichita Falls	953.27	1,277.38
Associated Petroleum Co., Fort Worth	23,554.15	28,634.28
Andrews Petroleum Corp., New York	5,884.00	6,254.27
Atlas Oil Corp., Humble	4,525.00	5,310.00
Alamo Oil Co., Brownwood	441.00	564.63
Anchor Oil Co., Dallas	1,834.91	2,382.18
Associated Oil Co., San Francisco, Calif.	40,297.38	43,379.36
American Refining Co., Inc., Wichita Falls	129,392.97	139,882.62
All-American Oil & Gas Co., Oklahoma City, Okla.	86.58	112.73
Acorn Oil Co., Beaumont	8,254.03	9,904.83
Alaska Petroleum Co., Amarillo	806.75	778.62
Amarillo Oil Co., Amarillo	2,376.34	2,257.52
Arkansas Fuel Oil Co., Pittsburgh, Pa.	8,815.67	11,489.09
Ashe Syndicate, The, Fort Worth	979.55	1,286.11
Artex Oil Co., Wichita Falls	2,817.60	3,779.59
Adams, Brown & Lickey, Wichita Falls	60.16	80.61
Amerada Petroleum Corp., Tulsa, Okla.	244,104.50	286,968.06
Appleman, H., Tulsa, Okla.	13.66	16.91
Atlas Production Co., Burkburnett	422.52	574.32
Atlas Production Co. (3-31-27), Burkburnett	1,005.77	1,186.14
Ascot Co., The, Wichita Falls	12,224.00	17,692.87
Alonzo Jr. Oil Producers, Laredo	1,967.07	1,967.07

B

Bay Oil & Gas Co., Mirando City	1,442.56	1,442.56
Buchanan, S. R., Batson	14,366.30	17,239.68
Brownlee Pope Oil Co. (3-31-27), Austin	4,400.00	8,796.56
Bell Burke Oil Co., Waco	458.19	742.00
Beans, Drew (3-31-27), Okmulgee, Okla.	440.26	756.30
Birk & Kelly (3-31-27), Iowa Park	148.57	281.50
Beatty, F. A., Fort Worth	192.10	230.51
Beatty, F. A. (3-21-27), Fort Worth	351.82	527.73
Bexata Oil Co., San Antonio	1,983.37	2,376.85
Baird Oil Co., The, Moran	524.90	701.93
Brazos River Gas Co., Wichita Falls	245.15	347.77
Bartlett Production Co., Rockdale	3,872.76	5,353.49
Big 4 Consolidated Oil Co., El Paso	237.79	335.41
Beggs Oil & Gas Co., McKinney	1,422.00	1,961.56
Babcock, Scheurer & Schlaffke, Electra	139.58	189.85
Blue Bonnett Petroleum Corp., San Antonio	1,330.05	1,583.17
Bowman Oil Co., Rockdale	2,612.17	3,747.83
Basham, C. E., Wichita Falls	83.40	83.40
Britton, Gordan & Wickens, Strawn	343.00	463.05
Burton, McKee Oil Corp., Strawn	469.00	605.00
Black Diamond Oil Co., Amarillo	1,906.38	1,939.67
Bass & Dillard, Wichita Falls	2,683.40	3,688.10
Bartlett, Wm., & Co., Electra	491.00	513.12
Boyd, E. W., Wichita Falls	193.24	207.31
Braden Co., The, Eastland	2,680.49	3,841.10
Biel, Wm. A., Von Ormy	32.00	39.52
Baker, J. A. and Mollie B., Breckenridge	9,400.00	12,408.00
Black-Pearson & Hudson, Corsicana	7,243.13	7,243.13
Big Indian Oil and Dev. Co., Gainesville	696.20	1,002.52
Brown, Mrs. Carrie L., et al, Orange	30,492.85	36,591.40
Belva Oil Co., The, Eastland	30,828.61	40,255.27
Bonchil Co., The, Wichita Falls	6,624.32	9,528.45
Black Cat Oil Co., Electra	1,433.90	1,892.75
Bridwell & Heydrick Oil Co., Wichita Falls	117,377.90	164,926.59
Boller, C. W., Wichita Falls	8,106.64	11,020.54
Buckeye Development Co., Columbus, Ohio	69.93	83.92
Burns, L. T., Wichita Falls	175,646.54	240,652.70
Burns & Maxson, Wichita Falls	7,317.15	9,862.19
Bridwell & Heydrick, trustees, Wichita Falls	7,845.37	10,798.08
Barkley, T. G., Sour Lake	2,285.71	2,732.84
Barkley & Conway, Ranger	13,651.80	19,470.79
Bailey, Fannie, Wichita Falls	1,211.51	1,469.03
British American Oil Producing Co., Wichita Falls	14,012.98	19,796.08
Brinkley Producing & Refining Co., Pittsburgh, Pa.	627.90	791.45
Brownwood Producing & Refining Co., Brownwood	1,897.72	2,458.91
Barbara Oil Co., Oklahoma City, Okla.	31,665.96	43,838.03
Buckeye Pipe & Supply Co., Breckenridge	309.38	346.14
Broughton, S. J., Brownwood	89.64	114.86
Bashara & Bashara, Waco	274.00	388.40
Baldwin & Griswold, Fort Worth	1,303.25	1,772.37
Bynum & Palmer, Rockdale	317.81	413.96
Borealis Oil Co., Oklahoma City, Okla.	3,764.13	4,955.45
Bullington, Lee, Pendleton & Bullington, Wichita Falls	11,983.10	16,153.58
Beans, Drew, Okmulgee, Okla.	736.95	969.60
Beggs, Geo. Strip, Fort Worth	3,271.56	5,242.31
Baldwin, F. C., et al, Fort Worth	2,722.26	3,772.87
Bonner, J. H. S., et al, Wichita Falls	4,526.63	6,271.40
Badger Oil Co., Amarillo	7,594.79	7,215.05
Beaver Oil Corp., Oklahoma City, Okla.	20,237.40	18,350.67
Big Lake Oil Co., Pittsburgh, Pa.	1,702,783.12	1,951,105.21
Bluebonnett Oil Co., Wichita Falls	1,038.43	1,391.49
B. K. Oil Co., Austin	1,900.71	1,883.07
Buttram Petroleum Corp., Oklahoma City, Okla.	43,469.15	60,634.70
Blair & Kell, Dallas	1,283.35	1,674.63
Brown, Dr. E. W., estate, Orange	916.72	1,100.06
Bohner, C. J., Burkburnett	4,722.80	6,785.58
Bryan Oil Corp., Houston	1,332.90	1,759.42
Bashara, J. F., Houston	15,600.92	19,382.02
Barnsdall Oil Co., Tulsa, Okla.	64,001.92	76,974.89
Barkley & Meadows, Wichita Falls	88,482.11	138,490.72
Burkburnett Production Co., Baltimore, Md.	831.48	1,170.21
Bashara, M. J., Wichita Falls	26,896.11	30,728.87
Bridwell & Mayfield, Wichita Falls	13,639.47	18,945.45
Bruce, H. J., Wichita Falls	1,785.39	2,392.42
Bell Burke Oil Co., Waco	460.13	605.89
Bleakley & Kinnison, Wichita Falls	1,114.15	1,437.95
Barkley, Crotty, Six & Little, Ranger	3,800.02	4,864.01
Barkley & Crotty, Ranger	7,904.95	10,440.47
Brown & Co., Inc., Cisco	4,413.11	6,054.94
Brady Brothers, Minerva	5,080.99	6,592.36
Bevering, A. H., et al, Henrietta	2,779.61	3,163.54
Barkley & Meadows, Wichita Falls	3,333.25	4,498.80
Buffalo Oil Co., Amarillo	11,143.26	10,586.09
Burke-Greis Oil Co., Tulsa, Okla.	2,938.72	4,081.71
Burke, Greis Oil Co. and Gwinnup, Tulsa, Okla.	4,195.75	5,901.81
Booth Oil Co., Olney	317.00	362.62
Broderick & Perrin, Fort Worth	598.01	785.21
Brannon & Murray, Cisco	3,931.40	5,430.40
Beasley, C. U., Electra	321.86	426.56
Birk & Kelly, Iowa Park	316.74	438.45
Baker Oil Co., Inc., Houston	2,202.51	2,643.01
Bailey and Damuth Drilling Co., Wichita Falls	1,300.42	1,693.49
Breckenridge Gasoline Co., Toledo, Ohio	149.65	191.55

C

Cornelius Brothers and Taggart, Eastland	906.83	907.46
Crosbie, T. S., and G. K. Production Co., San Antonio	1,690.37	1,929.62
Caldwell-Guadalupe Pick Up Station, Luling	1,973.24	2,037.46
Cranfill & Reynolds, Cisco	96,495.53	124,970.11
Ciara Oil Co., Wichita Falls	417.53	812.86
Clough, Chas. E., Wichita Falls	1,949.98	3,266.55
Columbia Petroleum Co., Mirando City	21,587.34	26,033.85
Clear Creek Oil Co., Brownwood	485.00	785.70
Ciara Oil Co., Wichita Falls	529.93	708.27
California Co., The, Colorado	236,176.00	269,240.64
Center Dome Oil Co., Panhandle	1,000.00	950.00
Church & Fields, Midland	20,037.51	14,698.00
Camp Oil & Gas Co., Wichita Falls	4,110.39	5,403.69
Col.-Tex Oil Co., Spokane, Wash.	569.00	660.04
Canady, Roy, Corsicana	341.71	389.55
Charter Oil Co., Brownwood	10,606.28	13,424.84
Clear Creek Oil Co., Brownwood	536.21	675.60
Craig & Lowrey, Pittsburgh, Pa.	1,020.85	1,143.35
Caldwell, John W., Wichita Falls	2,203.78	2,994.89
Cady Oil Co. of Texas, Moran	2,847.68	3,701.99
Coffey & Schlaffke, Electra	158.08	213.37
Clear Lake Oil Co., Rockdale	3,501.63	5,139.20
Cowling & Hoops, Burkburnett	200.12	269.17
Carteret Oil Co., Jersey City, N. J.	1,276.19	1,705.71
Cowling & Newell Oil Co., Wichita Falls	328.90	624.20
Cranfill Brothers Oil Co., Dallas	6,859.23	9,137.88
Canyon Oil Co., Seminole, Okla.	56,480.00	57,128.00
Caruthers Co., San Antonio	2,326.14	2,751.85
Curry, E. M., Rising Star	5,381.22	7,120.20
Cranfill Brothers Oil Co., Wichita Falls	1,353.07	1,786.05
Collins, J. L., & Co., Corsicana	17,381.33	17,649.36
Cole, W. C., Wichita Falls	888.35	1,359.14
Clem Oil Co., Houston	600.17	600.17
Collier, J. W. and Mable, Markley	968.64	1,183.97
Clay, J. D., Houston	3,874.57	4,555.65
Cisco Oil Co., Tulsa, Okla.	40,584.29	51,728.20
Church-Weekly-Fields et al, Midland	126,335.53	92,664.06
Cox, Edwin B., Ardmore, Okla.	2,700.98	3,504.49
Crowe, W. H. and Elmer, Iowa Park	27.88	37.92
Canary, S. C., et al, Tulsa, Okla.	462.54	599.55
Coffey & Graham, Wichita Falls	511.20	695.23
Carlin & Tobin, Ranger	179.00	270.56
Carlin, W. W., Ranger	358.00	505.00
Campbell & Crenshaw, Wichita Falls	1,279.57	1,780.42
Crown Oil & Refining Co., Houston	17,044.76	20,453.71
Crown Central Petroleum Corp., Houston	90,526.58	90,526.58
Cluck & Bush, Waco	306.00	397.80
Chestnut & Smith Corp., Tulsa, Okla.	144.31	185.02
Capitol Oil Co., Orange	5,786.39	6,943.67
Conway Brothers & Gholson, Ranger	783.25	1,049.54
Coons & Hotchkiss, Graham	17,173.72	22,307.93
Canyon Oil & Gas Co., Inc., Cross Plains	6,995.21	9,552.45
Chapman, P. A., estate, Waxahachie	21,876.12	28,284.50
Crenshaw, Albert, Wichita Falls	1,746.81	2,402.63
Cosden, J. S., Inc., Fort Worth	29,768.05	38,996.15
Chapman, P. A., Jr., Eastland	630.60	798.15
Chenault, Palmer & Burch, Wichita Falls	22,208.37	29,124.21
Chenault N. B., Wichita Falls	4,416.66	5,938.56
Culbertson Co., Wichita Falls	20,327.45	28,045.80
Cook, R. H., Electra	239.32	283.62
Clark, R. R., Wichita Falls	20,562.87	27,558.95
Corpus Christi Oil Co., Corpus Christi	851.52	851.52
Caudle, F., Rockdale	411.00	538.41
Curtis, James A., Wichita Falls	3,958.12	5,383.05
Chicago Oil & Land Co., Inc., Rockdale	5,242.00	6,900.86
Cline, W. D., et al, Wichita Falls	570.20	775.46
Cline Oil Co., Wichita Falls	2,073.03	2,777.86
Champlin Refining Co. and J. T. Parks, Enid, Okla.	23,706.37	22,540.79
Choen & Lebow Trust, Baltimore, Md.	246.84	325.75
Corsicana Oil & Refining Co., Corsicana	10,345.81	10,445.04
Coppock & Coleman, Iowa Park	4,501.21	6,172.35
Cohen, Aaron, Baltimore, Md.	19,277.73	26,687.73
Continental Oil Co. of Texas, Wichita Falls	873,647.59	1,086,474.28
Continental Supply Co., St. Louis, Mo.	723.93	832.01
Christie Brothers, Wichita Falls	8,531.55	12,593.34
Coffield & Hale, Rockdale	5,347.06	6,889.49
Coyle Concord Oil Co., San Antonio	2,175.16	2,778.12
Cromwell, Carl G., Big Lake	12,071.13	9,472.90
Cromwell, Carl G., and Frank T. Pickerell, Big Lake	105,679.81	89,320.15
Central Holding Co., Wichita Falls	786.58	1,067.35
C. W. M. T. Oil Co., Wichita Falls	2,758.46	3,985.25
Cobble-Whittenburg Oil Corp., Amarillo	30,859.00	29,822.04
Connor Sons & Cloughley, Gotebo, Okla.	7,044.56	8,087.68
Castleberry, S. A., Vernon	563.82	729.64
Cook & Reeder, Wichita Falls	4,397.34	6,182.33
Consolidated Oil Co. of Texas, Wichita Falls	33,595.65	45,071.55
Cornhuskers Oil Co., Lincoln, Neb.	3,928.61	3,928.61
Clough, Chas. E., Wichita Falls	1,952.89	2,477.09
Corlett, W. B., Wichita Falls	790.76	1,055.60
Carter, Fine & Carter, Wichita Falls	3,190.00	3,803.96

D

Devenia Oil Co., Tulsa, Okla.	39,940.83	37,943.80
Dudley, G. S., Iowa Park	881.72	1,264.97
Duquesne Oil Corp. (3-31-27), Eastland	839.36	1,339.23
Dailey-McGee et al (3-31-27), Cisco	229.76	459.54
Deering, Jno. A., Houston	38,604.64	56,247.69
Davis & Wallace, Cameron	2,017.58	2,852.78
Deep Sands Syndicate, Carsicana	322.00	322.00
Dennis, J. S., Moran	1,762.12	2,267.36
Douglas Bros. Oil Co., Electra	768.64	1,042.21
Devonia Oil Co., Tulsa, Okla.	39,940.83	37,943.80
Dale O.l & Refining Co., Wichita Falls	1,899.28	2,539.02
Dismukes, H. A., receiver, Liberty	9,084.42	10,901.30
Dale Oil Corp., Wichita Falls	29,589.09	27,561.72
Davis, W. F., Wichita Falls	952.15	1,275.88
Dominion Oil Co., Tulsa, Okla.	2,059.56	2,690.53
Duffield & Howard Oil Co., Tulsa, Okla.	722.48	877.85
Douglas Oil Co., Tulsa, Okla.	3,829.89	3,538.40
Dale & Crawford, Electra	980.51	1,338.66
Davis, Caroline A., Somerset	506.51	597.66
Dixie Oil Co., Inc., Shreveport, La.	293,464.36	226,166.54
Dorian, R. P., Wichita Falls	8,102.48	11,056.88
Dalton, Jack Oil Co., Fort Worth	1,696.74	2,256.73
Dibble Oil Co., San Antonio	2,102.07	2,102.07
Dunigan Bros. (Dunigan et al), Amarillo	13,838.03	13,146.14
Dale Knotts Oil Co., Wichita Falls	318.24	432.79
Douglas Production Co., Electra	2,611.98	3,770.37
Diana Oil Co., Tulsa, Okla.	7,436.57	9,934.46
Dixie Drilling Co., Fort Worth	828.59	1,136.89
Dillon-Glascock Co., San Antonio	531.66	623.30
Dunaway, J. E., et al, Wichita Falls	2,306.83	3,134.14
Dixon, Reeder & Cook, Wichita Falls	1,463.05	1,976.79
Davis, L. R., Tulsa, Okla.	284.77	302.14
Delmar Oil Co., Bartlesville, Okla.	7,559.79	7,138.44
Duquesne Oil Corp., Eastland	514.44	755.75
Double Five Oil Co., Amarillo	2,540.35	2,413.32
Den-Wich Oil Co., Abilene	940.98	1,229.18
Dalton Bell Oil Co., Mineral Wells	558.00	736.56
Derby & Haines, Wichita, Kans.	15,667.37	14,884.00
Derby, Haines & Williams, Wichita, Kans.	133,272.72	126,609.08
Deutser, B., Beaumont	1,147.46	1,377.95
Dayton Oil Co., Dayton	126.36	151.63
Dixon & Reeder, Wichita Falls	384.79	426.38
Derby Oil Co., The, Dallas	1,506.21	1,903.45
Durston, H. H., Fort Worth	1,394.62	1,676.92

E

Erie Investment, Ltd., Toronto, Canada	78,530.58	79,408.54
Erickson, David, Wichita Falls	59.66	83.59
Echo Oil Co., Amarillo	133,434.86	126,936.41

'ROUND THE CALENDAR

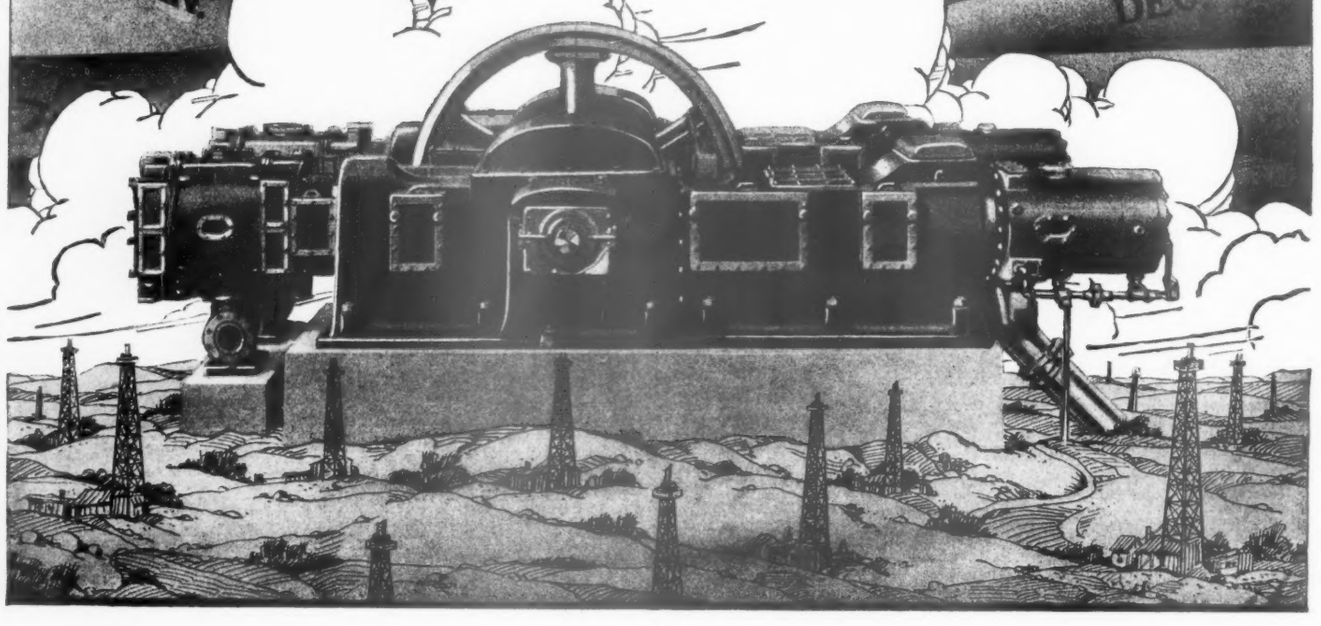
THE degree of Bessemer Compressor performability can best be gauged by their month-in-and-month-out operation on all types of compressor work. With their high mechanical and compressor efficiency, with their rugged simplicity and easy accessibility of all parts and with their utter dependability, Bessemers offer an unmatched value for natural gasoline plants, booster stations and for flowing wells.

THE BESSEMER GAS ENGINE COMPANY
York Street ∴ ∴ ∴ Grove City, Pa.

BESSEMER

GAS FIELD ENGINE - COMPRESSORS - VACUUM PUMPS - ROLLER PURIFIERS

JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEP. OCT. NOV. DEC.



Name and Address—	Barrels	Value
Ellis & Lancaster, Beaumont	816.99	980.38
Electra Gulf Oil (3-31-27), Electra	3,749.66	6,875.57
Ellison Oil Co., Rockdale	389.45	494.50
East Batson Oil Co., Batson	16,464.45	19,758.38
Easton, E. S., Wichita Falls	2,196.74	2,957.58
Electra Production Co., Inc., Electra	1,376.05	1,912.70
Electra Callahan Oil Co., Electra	1,007.14	1,355.73
Electra Gulf Oil Co., Electra	5,658.34	6,675.45
Eastern Petroleum Corp., Wichita Falls	2,107.20	2,754.47
Empire Holding Corp., Wichita Falls	2,739.89	3,616.62
Eureka Producing Co., Tulsa, Okla.	25,106.26	23,738.24
Eason, T. T., Enid, Okla.	2,346.59	1,823.56
Engel, E. A., Albany	1,066.02	1,364.41
Ernest Oil Co., Rockdale	1,146.31	1,490.20
Empire Gas & Fuel Co., Bartlesville, Okla	282,084.40	321,971.13
Eggers, J. E., San Antonio	935.54	1,119.08
Eddy Oil Co., Beaumont	180.05	216.06
Evangeline Petroleum Co., Wichita Falls	4,153.68	4,652.04
Eastland Oil Co., Fort Worth	649,284.29	548,434.11
Ellis & Anderson, San Antonio	215.28	257.84
F		
Frio Oil Co., San Antonio	461.51	460.64
Fuchs, Fritz, Taylor	893.00	1,217.00
Farlyn Oil Co., Houston	34,412.99	38,642.53
Fisher-Gilliland-Gates-Nutt (3-31-27), Wichita Falls	3,982.10	7,127.96
Fisher & Gilliland (3-31-27), Wichita Falls	4,680.03	8,377.25
Fisher-Gilliland-Gates-Nutt, Wichita Falls	3,663.70	5,050.74
Fisher & Gilliland, Wichita Falls	3,984.36	5,407.80
Four Oil Co., Wichita Falls	3,457.97	4,668.89
Fuqua & Hipp, Grandfield, Okla.	1,718.55	2,193.87
Foster, Jno. F., receiver, Fort Worth	14,510.82	19,831.93
Fisher, R. E., trustee, Burkburnett	806.84	1,076.13
Fresno Oil Co., Wichita Falls	20,197.39	27,569.44
Falls Production Co., Wichita Falls	12,921.49	17,404.07
Florence Oil Co., Cross Plains	1,070.80	1,484.80
Farish & Ireland lease, Houston	4,692.46	5,566.48
Fogle Oil Co., Minerva	2,195.28	2,746.42
Foster & Sandford, Fort Worth	702.42	814.80
Ferguson, Hawkins & Hester, Wichita Falls	1,238.86	1,698.54
Fountain Production Co., Saratoga	3,792.59	4,551.51
Franchot, D. W. & Co., Tulsa, Okla.	149.12	184.33
Fronier Oil Co., San Antonio	15,807.34	14,550.90
Fensland Oil Co., of Texas, Denver, Colo.	7,102.28	9,211.01
Flynn, W. B., Beaumont	4,133.90	5,044.37
F. H. E. Oil Co., Sherman	25,250.90	25,587.32
Fleming & Kimbell, Sherman	11,794.34	10,812.57
Ferguson & Watson, Electra	1,996.56	2,718.49
Ferguson, W. R., Wichita Falls	574.60	781.04
Fort Ring Oil & Gas Co., Fort Worth	364.80	546.27
Five Rivers Oil & Gas Co., Wichita Falls	733.76	976.00
Fain-McGaha Oil Corp., Wichita Falls	198,773.14	251,478.53
G		
Godley Oil & Gas Co., Dallas	13,518.57	17,694.69
Gordon Oil Co., of Texas, Logan, Ohio	152.58	172.72
Grady, D., Electra	625.83	871.36
Gunn Production Co., Cross Plains	4,477.00	5,423.36
Gulf Coast Oil Corp., Houston	22,073.38	26,488.05
Grand Duke Producing Co., Muskogee, Okla.	168.44	219.00
Gholson, Thompson, Barkley & Crotty, Ranger	4,631.63	6,122.86
Graham & Lash, Moran	602.60	807.48
Goolsbee & Graham, Wichita Falls	212.20	274.41
Graham, H. L., Wichita Falls	1,410.18	1,953.03
Gladis Oil Co., Saratoga	2,993.59	2,993.59
Grayce Oil Co., Wichita Falls	27,853.71	38,985.64
Galvez Oil Corp., Tulsa, Okla.	5,059.44	6,628.33
Gates Oil Co., Ardmore, Okla.	4,802.00	7,119.44
Gallagher & Lawson, Desdemona	1,090.07	1,252.15
Gray, T. H., Fort Worth	1,090.07	1,252.15
Ginter-Lange Oil Co., San Antonio	2,090.00	2,589.87
Ginter, Geo. E., San Antonio	260.86	325.37
Gilliland Oil Co., Tulsa, Okla.	857.15	1,258.66
Gladys Belle Oil Co., Tulsa, Okla.	8,497.71	10,294.56
Gates-Bacon-Lea, Wichita Falls	24,584.34	33,052.66
Gilman & Conway Bros., Ranger	11,967.17	16,785.20
Gopher Oil Co., Amarillo	7,233.10	6,871.44
Goldeline Oil Corp., Oklahoma City, Okla.	20,237.40	19,350.67
Galbraith Oil Co. No. 1, Wichita Falls	205.46	228.33
Gulf Production Co., Houston	6,195,776.68	6,813,851.24
General Oil Co., The, Houston	229.49	329.18
Gillman Logan Oil Co., Fort Worth	3,494.44	4,003.02
Glascock Leasing Syndicate, San Antonio	2,422.76	2,946.51
Groupe No. 1 Oil Corp., Big Lake	649,221.79	740,202.13
Gutzler, W. T., Wichita Falls	181.31	237.86
Golding & Cochran, Wichita Falls	11,900.93	15,233.18
Gillespie, R. G. estate, Cisco	6,120.54	8,467.22
Gibson Oil Corp., Amarillo	60,260.21	63,249.52
Grayburg Oil Co., San Antonio	231,218.27	234,988.48
Guaranty Oil Co., Electra	212.76	263.17
Gohman Oil Co., Rockdale	634.98	812.56
Guthrie, Cole & Ferguson, Wichita Falls	1,357.36	1,764.57
Golden West Oil Co., San Antonio	21,759.13	24,916.76
Garrett, W. T., Eastland	941.28	1,215.77
Golden Rod Oil Co., Dallas	451.00	611.36
Gates Oil Co., Denver, Colo.	15,652.43	14,869.80
Godfrey, F. L., Enid, Okla.	102.75	159.45
Gardner Bros. & Collins, Wichita Falls	957.69	1,283.30
Goolsbee & Goolsbee, Wichita Falls	283.43	369.49
Gholson, Moorman & Dorsey et al, Ranger	4,230.68	5,732.66
Gilman & Mendhall, Cisco	592.79	789.15
Gholson, Jno. M., et al, Ranger	43,174.23	57,533.95
Gwynn, P. F., Wichita Falls	289.43	354.28
Gwynn, P. P. agent, Wichita Falls	2,140.32	2,868.00
Gwynn-Boyd Drilling Co., Wichita Falls	23,711.61	23,713.69
Gultex Production Co., Waxahachie	4,472.50	6,172.03
Goldsmith, N. D., Olney	115.44	152.38
Gilbert Co., The, Beaumont	7,505.38	9,006.45
Gaither Production Co., Rockdale	2,465.00	3,200.73
Gordon, H. B., Jr., Houston	3,775.14	5,347.46
Granit Oil & Gas Co., Ridgway, Colo.	410.12	564.97
Glass Bros., Rosebud	981.56	1,246.67
Glasscock, R. V., San Antonio	776.17	927.66
Glenridge Oil Corp., St. Louis, Mo.	4,816.31	5,739.64
Goldhill Oil Co., Iowa Park	1,958.98	2,602.57
Gutzler & Cottingham, Indianapolis, Ind.	52.85	67.95
H		
Hyde & James, Albany		24,722.46
Houston Production Co., Houston	23,040.48	28,518.64
Hickok Prod. Co., Toledo, Ohio	158.76	177.81
Hardy Oil Co., Wichita Falls	3,376.96	4,383.10
Hefley, McIntosh & Thomas, Cameron	784.80	988.49
Horn & Horn, trustees, Kansas City Mo.	3,249.56	3,509.72
Hambleton, Geo., San Antonio	552.35	670.14
Hambleton, Robt. et al, Eastland	480.00	548.34
Hoppes, W. T., Burkburnett	79.76	106.90
Hueco-Ranger Oil Co. (3-31-27), El Paso	346.20	609.03
Hambleton, Geo. (3-31-27), San Antonio	612.62	952.16
Hutchinson County Oil Co., Amarillo	450.00	508.50
Hyde Production Co., Houston	7,270.44	9,611.86
Houghland Production Co., Ponca City, Okla.	6,496.26	8,403.42
Hub Oil Co., Dallas	354.37	487.07
Henderson, E. R., trustee, Tulsa, Okla.	242.68	312.50
Howell, J. H., trustee, Electra	191.79	248.74
Halmack Oil Co., Dallas	3,291.21	4,349.01
Houston Oil Co., of Texas, Houston	9,182.13	10,466.14
Hedrick-Camp Drilling Co., Wichita Falls	12,053.92	14,942.70
Hamilton & Martin, Wichita Falls	1,589.92	2,098.56
Holloway, R. R., receiver, Brownwood	329.28	437.94
Home Oil & Gas Co., Inc., Albany	503.50	644.48
Hope Oil & Gas Co., Fort Worth	33,883.35	43,613.11
Hammond, J. G., Wichita Falls	318.91	433.71
Harvey, R. A., Houston	2,111.00	2,437.50
Hamilton, Walter R., trustee, San Antonio	6,476.23	8,456.70
Hooser Oil & Development Co., Dallas	932.00	1,266.78
Hooser, John, W., Dallas	1,906.68	2,576.94
Hinson & Tidwell, Graham	3,683.52	5,134.36
Humble Oil & Refining Co., Houston	3,017,439.55	3,515,406.21
Hemby, J. H., Electra	1,060.62	1,468.00
Helvetia Oil Co., San Antonio	16,829.75	19,726.58
Hanlon Gasoline Co., Tulsa, Okla.	1,579.85	1,971.85

Name and Address—	Barrels	Value
Howard Petroleum Co., Tulsa, Okla.	838.82	1,146.86
Hobbs Oil Co., Tulsa, Okla.	3,495.61	4,649.27
Hester, Hawkins & Ferguson, trustees, Wichita Falls	1,907.76	2,564.56
Humphreys Corporation, Inc., Brownwood	679.43	930.82
Herbert Oil Co., of Texas, Fort Worth	1,287.65	1,748.37
Hockaday & Shaw, Wichita Falls	1,786.01	2,390.21
Hughes, Wm. K., trustee, St. Louis, Mo.	1,226.51	1,696.44
Humphreys Corporation, Houston	114,887.24	142,594.44
Homaokla Oil Co., Oklahoma City, Okla.	4,845.77	6,800.65
Humphreys & Merritt, Wichita Falls	2,010.43	2,724.72
Hines, Harry, Wichita Falls	7,967.04	10,515.35
Hankamer, E. C., & Co., Beaumont	935.96	1,123.15
Hamon, Jake L., Jr., Ardmore, Okla.	14,342.16	18,409.41
Hamilton & Wilson, Wichita Falls	4,672.28	6,391.02
H. B. J. Oil & Gas Trust, Baltimore, Md.	2,284.20	3,221.44
Hammon, Wayne H., special account, Wichita Falls	1,665.14	2,175.20
Hammon & Heyser, Wichita Falls	377.74	513.72
Hammon & Garrett, Wichita Falls	4,464.95	6,137.91
Hammon, Heyser & Garrett, special account, Wichita Falls	14,612.12	17,841.92
Hammon, Heyser, Garrett & King, Wichita Falls	3,717.49	5,281.80
Hammon, Heyser & Garrett, Wichita Falls	2,044.08	2,791.97
Harwell Brothers, Abilene	995.36	1,343.73
Harwell, O. H. and O. E., Abilene	798.68	1,078.68
Hardie, J. M. & Co., Sour Lake	808.17	808.17
Hull Oil Co., Beaumont	22,760.09	27,212.31
Hughes, J. K., Oil Co., Inc., Mexia	43,479.49	56,676.02
Hughes, J. K., Dev. Co., Mexia	568,241.57	708,318.57
H. Y. Oil Co., Inc., Fort Worth	2,583.26	3,518.05
Hitchman & Howard, San Antonio	1,682.87	2,072.02
Hart Oil Corp., Fort Worth	338.17	450.55
Hart-Mexia Syndicate, Fort Worth	740.06	980.22
Harris & Simons, Tulsa, Okla.	10,991.49	11,072.58
Howard, Duffield & Berlin, Tulsa, Okla.	1,150.15	1,527.77
Holmes & Riley, Amarillo	11,837.81	11,245.92
Hill & Riley, Amarillo	2,488.33	2,363.91
Huber, J. M., Co. of La., Inc., Breckenridge	831.10	999.31
Hoffer Oil Corp., Fort Worth	9,290.91	13,100.50
Holbrook & Woods, Wichita Falls	12,935.53	17,416.17
Howell, M. L., Lohn	745.59	974.47
Hammond L. P., Wichita Falls	2,668.78	3,622.08
Hagaman Refining Corp., Ranger	908.16	1,448.66
Holmes & Huey, Amarillo	10,000.00	9,581.70
Hamilton, Geo. B. (7-1-26 to 6-30-27), Olney	2,627.72	5,014.98
Harris-Hays Co., Okmulgee, Okla.	1,154.96	1,429.25
Holman Brothers and J. A. Leidecker, Graham	4,346.27	6,078.36
Houseman, D. H., & Co., Dallas	31.78	43.33
Harris-Fisher Oil Co., Cisco	1,109.44	1,399.16
I		
Invader Drilling Co., Amarillo	12,349.60	13,838.86
Interocean Oil Co., Tulsa, Okla.	17,514.31	23,168.58
Irick Oil Co. of Ohio, Waskom	409.68	515.00
Isaacs, B. K., Fort Worth	1,518.73	1,904.85
Independent Oil & Gas Co., Tulsa, Okla.	220,271.68	180,707.48
Idaho Oil Co., San Antonio	1,217.78	1,479.39
Ilseng Production Co., Fort Worth	1,561.35	2,051.26
Ilseng, A. G., Fort Worth	321.43	447.51
Infield Petroleum Co., Austin	1,250.25	1,672.18
J		
Jones, D. H. (3-31-27), Mirando City	797.63	997.04
Jones, D. H., Mirando City	598.54	598.54
Jones-Garcia Oil Co. (3-31-27), Mirando City	1,668.25	2,085.31
Jones-Garcia Oil Co., Mirando City	1,217.79	1,217.78
Johnson Brothers, San Antonio	11,632.25	13,992.92
Jackson, T. H., Sipe Springs	253.80	328.98
Jennings, J. C., et al, Wichita Falls	1,001.12	1,414.86
Janellen Oil Co., Tulsa, Okla.	127.07	163.28
Johnson, O. C., trustee, San Antonio	1,101.28	1,376.59
Jones, J. A., Moran	534.74	735.02
Jacob Oil & Gas Co., Graham	521.70	696.78
Jones, W. A. (Phillips lease), Minerva	232.91	300.43
Japhet Production Co., Houston	34,277.96	32,564.05
Judson Oil Co., Tulsa, Okla.	12,534.37	16,887.94
Julia Oil Co., Sour Lake	4,185.65	5,022.78
Jones, Edwin M., El Dorado, Ark.	26,101.73	30,212.39
Jones, J. E., Wichita Falls	1,285.73	1,745.64
Jonray Oil Co., San Antonio	4,143.26	4,943.38
Jones Oil Co., Wichita Falls	2,175.99	2,935.30
Jackson Co., The, San Antonio	1,443.03	1,743.72
Junior Oil Co., Cross Plains	2,073.55	2,968.49
Jackson, J. S., trustee, Sour Lake	2,893.97	3,472.76
Jameson, Chas. M., Moran	1,108.54	1,521.26
K		
Killam, O. W., Laredo	2,786.31	2,796.31
Keystone Production Co., Fort Worth	4,602.90	6,296.19
Kilgore, M. H. (3-31-27), Beaumont	265.55	350.63
Kimmell & Dillard, Wichita Falls	5,962.42	10,774.77
Kilgore, M. H., Beaumont	916.71	1,100.05
Kent-Middleton Refining Co., Corsicana	27,578.99	35,545.79
Klemcke, Geo., trustee, Von Ormy	2,708.69	3,150.71
Kerr, T. P., Corsicana	384.53	439.31
Kuhlmeier-Kleiner Oil Co., Cisco	608.84	815.88
Kate Bell Oil Co., Dallas	1,394.34	1,882.68
Kurz Oil Co., Somerset	590.02	679.28
Kone Production Co., San Antonio	13,549.29	18,945.97
Keener Oil & Gas Co. of Texas, Tulsa, Okla.	7,117.94	9,347.15
Kolp, C. F., Electra	11,251.64	14,819.88
Kendricks, P. S., Albany	1,118.27	1,380.66
Kaufman, L., San Antonio	445.71	521.76
Kavanaugh Petroleum Co., Houston	1,238.25	1,609.73
Kimmell & Dillard, Wichita Falls	5,079.00	6,592.05
Kemp Munger Allen Oil Co., Wichita Falls	7,716.41	10,422.22
Kent, G. C., Corsicana	47,194.37	59,051.74
Kirby Petroleum Co., Houston	4,344.90	6,071.10
Kleinfelder, B. F., Breckenridge	959.40	1,247.21
Kishi, K., Terry	1,562.58	1,875.10
King & Daniel, Wichita Falls	4,237.31	5,817.28
K. & S. Corp., Laredo	26,131.26	26,131.26
Kahle, Gracey & Diver, Bridgeport, Ill.	13,309.41	14,906.62
Kemrow Co., Wooster, Ohio	18,020.14	24,849.13
Keen & Woolf Oil Co., Shreveport, La.	23,644.82	28,373.76
Kistler, Frank E., & Co., Inc., Denver, Colo.	122,587.13	116,457.77
Kewanee Oil Co., The, Titusville, Pa.	84,478.59	106,613.33
King Royalty Co., Wichita Falls	32,085.57	45,731.23
Knotts, F. F., Wichita Falls	582.81	793.63
L		
Lee, R. Q., Cisco	194.51	261.96
Lesh-Kilcrease Co., Nocona	4,888.42	5,605.84
Liberty Oil & Gas Trust, Baltimore, Md.	1,773.53	2,256.67
Lay Oil Co., Cisco	140.12	229.67
Long, F. M., Humble	728.61	1,005.09
Lewis, M. L., Wichita Falls	644.80	1,103.68
Lee-Dingee Oil Co., Albany	2,288.14	2,974.82
Long, Roy, Oil Co., Navasota	2,764.97	3,764.84
Laclede Petroleum Co., Dallas	96.00	168.00
Lake Erie Trust Co., trustee, Cleveland, Ohio	1,046.57	1,271.82
Lytle Oil Assn., Lytle	279.98	322.13
Lowenstein Oil Co., Rockdale	725.38	1,015.51
Lee-Dingee Oil Co. (3-21-27), Albany	6,337.86	11,464.23
Larkin, W. B., Wichita Falls	514.75	385.24
Lawson, E. B., Nowata, Okla.	46,785.52	62,426.60
Lester, W. V., et al, Eastland	63,521.79	90,675.29
Lackey, W. G., Tulsa, Okla.	6,467.22	8,653.97
Leonard, Geo., Somerset	173.00	190.30
Leonard Oil Co., Somerset	372.00	446.41
Lamb, Geo. E., Brownwood	518.75	677.25
Lowery, J. T., Albany	125.81	141.24
Little, Wm., Breckenridge	205.03	253.58
Lynch, Stahl & Burress, Ardmore, Okla.	8,062.01	9,381.00
Lomax, Thornton, Jr., Wichita Falls	8,102.86	11,144.40
Lowe, Delaney & Carter, DeLeon	1,786.56	2,418.54
Lee, Homer, Wichita Falls	2,988.92	4,067.68
Lake View Oil Co., Sour Lake	16,988.35	20,366.02
Levy, Leonard M., trustee No. 1, Ranger	4,287.22	6,387.94
Laredo Oil Co., Laredo	2,886.89	2,886.89
Lewis, J. E., et al, Eastland	1,522.20	2,017.64

Name and Address—	Barrels	Value
Lewis, J. E., & Co., Eastland	1,953.59	2,587.94
Lebow, C. H., Tulsa, Okla.	801.60	1,106.19
Lynch, John D., trustee, Sioux Falls, S. Dak.	2,553.25	3,657.41
Lytle, C. F., Mexia	32,110.47	40,821.00
Lucey Petroleum Co., Dallas	936.03	1,213.59
Lake Graham Oil Co., Houston	7,101.73	9,808.27
Louisiana Oil & Refining Corp., Shreveport, La.	32,968.65	40,937.68
Lone Star Gas Co., Dallas	11,761.50	15,700.86
Len-Cook Oil Co., Electra	1,135.00	1,535.79
Lowry Oil Corp., Wichita Falls	3,202.39	4,317.74
Little Caddo Syndicate, Fort Worth	2,724.55	3,600.62
Letwin, Sam, Breckenridge	3,027.64	3,912.08
Langford, W. S., Wichita Falls	1,444.69	1,903.83
Lucky Ten Oil Co., Amarillo	6,576.32	8,220.40
Levy, Leonard M., trustee No. 2, Fort Worth	2,199.44	3,202.33
Lain Oil Co., San Antonio	1,395.36	1,655.33
Linedo Oil Co., Lincoln, Neb.	2,671.57	2,671.57
Landreth Production Co., Breckenridge	66,773.46	56,029.61
Lesh & McCall, Nocona	45,496.62	50,933.76
Lesh, John I., & Co., Wichita Falls	2,203.08	2,509.57
M		
Murchison Oil Co., Wichita Falls	33,197.06	36,187.52
Mortimer, Hobbs & Ferguson, Abilene	2,286.33	2,638.80
Middleton, J. H., Collinsville, Okla.	13,937.85	13,240.96
Moran, J. J., Wichita Falls	1,962.26	2,671.36
Medina Oil & Gas Assn., San Antonio	292.31	349.69
Monarch Royalty Corp. (3-31-27), Kansas City, Mo.	4,170.00	9,054.60
Manhattan Oil Co. (3-31-27), Kansas City, Mo.	93,016.63	174,545.63
Maxson & Co. (3-31-27), Wichita Falls	1,958.26	3,525.03
Miller & Miller, Putnam	750.88	1,006.20
Mills & Garitty, Corsicana	1,941.84	1,941.84
Minor Oil Co., Beaumont	8,794.75	10,553.70
Madison Oil & Gas Co., Electra	13,893.04	19,922.62
Moore & Henderson, Tulsa, Okla.	548.12	714.44
Mann, W. L., estate, and Cosmopolitan Oil, Wichita Falls	1,024.76	1,225.46
Murphy, J. A. (12-31-26), Mineral Wells	875.43	1,820.27
Murphy, J. A., Mineral Wells	370.00	456.00
Manning, R. H., Fort Worth	2,024.61	3,574.32
Manhattan Oil Co., Kansas City, Mo.	24,482.00	29,739.25
McCarter, R. C., Cisco	873.60	1,178.98
McDonald, M. C., Cisco	5,062.86	6,822.29
McDonald, W. W., et al., Dallas	5,390.10	7,038.60
Magee Bros., Electra	703.08	966.79
Marland Oil Co. of Texas, Fort Worth	1,386,779.12	1,411,274.85
McElreath-Suggett-Anderson & Gaus, Wichita Falls	542.02	715.52
Montgomery-Rea & Montgomery, Sedwick	2,644.08	3,490.18
Macknold Company, San Antonio	316.00	366.56
Midwest Exploration Co. (The), Amarillo	343,767.96	342,179.17
McChesney, Nancy, Olney	9,096.47	13,208.03
McNallen & Griffin, Tulsa, Okla.	4,916.12	6,326.01
May, F. N., Santa Anna	2,028.88	2,556.38
Monarch Royalty Co., Kansas City, Mo.	11,051.00	12,215.86
Mann & Forbes, Graham	2,384.08	3,256.59
Marnet Oil & Gas Co., Tulsa, Okla.	4,684.71	5,375.28
Minerva Petroleum, Minerva	1,534.47	1,995.11
Martin, Albert, Receiver, Laredo	6,162.89	6,162.89
Moss, Urschel & Keys, Mexia	20,687.67	26,583.65
Moss & Urschel, Mexia	3,117.90	3,990.91
Moss & Keeling et al, Mexia	14,571.64	18,651.69
Moss & Keeling, Mexia	3,296.60	4,747.10
Meridian Petroleum Corp., Tulsa, Okla.	4,053.40	5,277.30
Madden & Hunt, Olney	9,368.17	12,737.94
Magee & Stipe, Electra	1,119.24	1,544.45
McCarty Oil Co., Wichita Falls	139,722.82	191,881.96
Maben Oil Corp., Wichita Falls	351.61	460.04
Morton, A. D., Bartlesville, Okla.	488.12	629.67
Mid-Kansas Oil & Gas Co., Findlay, Ohio	435,222.77	396,025.83
Midwest & Gulf Co. of Texas, Tulsa, Okla.	1,617.01	1,938.68
Matador Oil & Gas Co., Quanah	266.50	318.78
McJunkin, Florence, Ranger	971.76	1,452.78
McKanna, James E., Agent, Wichita Falls	174,233.56	245,278.17
McCrary, E. W., Tulsa, Okla.	4,189.71	5,347.05
Merrick & Bristow, Ardmore, Okla.	6,403.36	7,513.93
Milham Corp. of Texas, San Antonio	136,066.83	173,413.75
Mues & McDermott, Fort Worth	410.88	470.94
Maer & Staniforth, Wichita Falls	37,499.50	49,569.28
Majestic Oil Co., Amarillo	34,906.95	37,933.81
Moore, N. A., Eastland	1,571.88	2,013.92
M. & V. Oil Co., Wichita Falls	7,053.45	9,521.02
Moutray & Son, Abilene	479.96	609.55
McMan Oil & Gas Co., Tulsa, Okla.	470,548.80	474,109.49
Maxwell, J. C., Fort Worth	137,569.32	137,301.44
Mook Texas Oil Co., Fort Worth	16,894.85	23,374.41
Moutray Oil Co., Abilene	57,133.15	77,735.20
Mudge Oil Co., of Texas, Pittsburgh, Pa.	617.25	686.38
Margay Oil Corp., Tulsa, Okla.	4,130.20	5,717.73
Mann, F. A., Graham	1,211.00	1,671.18
Minntex Oil Corp., Wichita Falls	741.33	958.28
Mid-Continent Petroleum Corp., Tulsa, Okla.	20,396.34	26,309.47
Mac-Ed. Oil Co., Beaumont	169.87	323.85
McGregor, Stanley, Wichita Falls	2,115.53	2,908.73
Mancill, R. W., Cisco	188.00	249.65
Marsalis Bros., Humble	2,347.55	2,825.20
McDaniel, E. R., Cisco	6,092.75	8,507.74
McNamara Oil Co., Beaumont	2,775.12	3,330.14
Milam Production Co., Rockdale	859.33	1,100.84
McClure, W. D. & Sons, Iowa Park	858.02	1,120.86
Mennis, G. W., Wichita Falls	3,929.18	5,250.47
McCutchen, C. E., trustee, Wichita Falls	9,880.54	13,302.68
Meredith, J. D., Moran	5,438.03	6,078.49
Moody Corp., Houston	50,952.45	60,713.52
Moran, W. J., Wichita Falls	1,455.00	2,013.20
Minnehoma Oil & Gas Co., et al, Tulsa, Okla.	64,696.76	61,461.92
Mendenhall Oil Co., Cisco	3,166.04	4,348.45
McBride, W. C., Inc., St. Louis, Mo.	3,206.66	3,790.80
Moore, F. L., trustee, Tulsa, Okla.	3,827.16	5,102.13
McEwan, J. P., Fort Worth	1,629.49	2,031.53
Mitcham, G. P., Cisco	750.40	875.95
Mitcham, G. P., (3-31-27), Cisco	836.09	1,181.17
Mary Elizabeth Oil Co., Dallas	8.94	10.71
McLester Oil Co., Eastland	48,276.00	63,160.47
Magnolia Petroleum Co., Dallas	2,926,145.05	3,128,624.26
N		
New Oil Co. and Homer Slicker, Cisco (3-31-27)	441.70	719.17
National Petroleum & Refining Co., Wichita Falls	1,062.50	1,970.56
Neptune Oil Corp., Amarillo	893.47	992.80
National Oil Co., San Antonio	1,028.55	1,193.11
National Petroleum & Refining Co., Wichita Falls	1,556.81	2,203.86
Navarro Oil Co., Houston	161,082.41	201,297.28
New Oil Co. and Homer Slicker, Cisco	1,102.69	1,373.55
New Domain Oil & Gas Co., Pittsburgh, Pa.	8,963.33	8,515.16
Newton Palmer Oil Co., Rockdale	1,548.62	1,988.64
Number Nine Oil Corp., Tulsa, Okla.	2,950.56	3,965.81
Noble Thomas Oil Co., Wichita Falls	2,321.74	2,702.17
Noble Oil & Gas Co., Tulsa, Okla.	4,292.01	5,570.96
Noack Oil Co., Rockdale	4,081.86	5,513.19
Norman Oil Co., Wichita Falls	2,233.33	3,037.35
Nunn McCauley Oil Co., Amarillo	64,333.00	61,116.35
Necessity Oil Corp., Dallas	2,767.68	2,998.98
Nabob Oil & Gas Co., Amarillo	12,245.44	12,329.99
O		
Oldom Wm. P., Iowa Park	1,536.92	2,109.12
Oklavania Oil Co., Tulsa, Okla.	6,894.46	8,775.48
Omilak Oil Co., Spokane, Wash.	351.00	421.20
Old Colony Oil Co., Dayton	2,663.51	3,196.23
Old Ocean Oil Co., Kansas City, Mo.	4,986.32	5,522.39
Oil Investment Co., Wichita Falls	4,616.40	6,131.72
Oktaha Co., The, Tulsa, Okla.	978.88	1,319.84
Owenwood Oil Corp., Fort Worth	1,992.00	2,499.32
Owenwood Pool No. 3, J. W. Robbins, trustee, Fort Worth	5,595.00	7,674.03
Ohio Somerset Oil Co., San Antonio	1,903.27	2,017.46
Oil Operators Trust, Fort Worth	45,528.92	54,407.51
Oakwood Oil Syndicate, Fort Worth	63.36	79.20
Olean Petroleum Co., Bristow, Okla.	45,995.25	48,463.20
Osage Oil Corp., Tulsa, Okla.	358.48	340.62
Owens Oil Co., Brownwood	1,366.52	1,527.27
Overby, J. D., Iowa Park	713.45	956.99

Name and Address—	Barrels	Value
Orange Petroleum Corp., Orange	48,306.63	58,423.94
Oriental Oil Co., Dallas	1,725.07	2,237.23
Olney Oil & Refining Co., Olney	818.01	1,079.77
O'Neil, John, Wichita Falls	17,935.74	26,400.68
Or.h, Thos. R. T., Wichita Falls	368.06	478.44
Osage Development Co., Bartlesville, Okla.	1,996.17	2,996.17
O'Neil, H. A., Burkburnett	3,123.11	4,139.84
Omahundro, W. B., Wichita Falls	2,453.37	3,457.66
P		
Phillips & Milam, Chelsea, Okla.	128.31	169.36
P. & M. Drilling Co., Ross & Samuels and A. J. Farley, Chelsea, Okla.	337.74	462.04
Phillips, J. R., (Invador), Amarillo	78,530.58	79,409.54
Piper, E., Vernon	2,084.77	2,761.96
Pinto Oil Co., Mineral Wells	234.42	286.82
Pemeta Oil Co., Fort Worth	5,644.85	7,416.14
Pioneer Oil, Gas & Refining Co., Danville, Ill.	1,386.56	1,488.56
Prescott-Phoenix Oil & Gas Co., Wichita Falls	2,013.59	2,615.82
Prescott-Phoenix Oil & Gas Co., Muskogee, Okla.	168.44	219.06
Pure Oil Co., Chicago, Ill.	925,217.41	1,282,851.30
Paraffine Oil Co., Houston	10,659.99	12,791.98
Pattison-Lenix Oil Co., Amarillo	28,934.29	27,485.71
Powers Production Co., Houston	3,177.99	3,514.03
Progressive Produc.ion Co., Kansas City, Mo.	3,302.04	4,490.71
Pois, M., Wichita Falls	378.88	507.58
Pois, Fine & Schulz, Wichita Falls	3,803.21	5,628.73
Pois, M., et al, Wichita Falls	6,503.99	8,863.37
Pois & Johnson, Wichita Falls	2,743.88	3,903.44
Pomona Mutual Oil Syndicate, Pomona, Calif.	3,807.27	5,148.92
Putnam Oil Co., Tulsa, Okla.	57,494.94	76,016.61
Perry, Moran & Woody, Wichita Falls	11,609.06	13,823.04
Parry Oil Co., of Texas, Fort Worth	1,507.99	1,956.16
Price-Russell & Co., Ranger	6,895.40	9,407.67
Pigg & Murchison, Vernon	435.00	556.80
Primrose Oil Co., Sour Lake	1,183.68	1,420.42
Pivoto, M. E., Sour Lake	3,825.86	4,591.02
Poor Boy Oil Co., Rockdale	861.52	1,137.20
Parsons, Ed. V., Fort Worth	250.44	277.84
Pickens & Lewis, Dallas	2,028.97	2,704.97
Plains Production Co. (3-31-27), Wichita Falls	1,559.50	2,056.09
Phillips, J. R., (Invador) (3-31-27), Amarillo	56,235.63	67,502.66
Parks, J. T., (3-31-27), Amarillo	22,899.78	26,913.18
Priddy, Walter M., Wichita Falls	12,089.10	15,715.83
Py-Tex Oil Co., Winchester, Ky.	26,343.03	36,331.16
Palmer Freddie Oil Co., Rockdale	161.78	182.62
Pandem Oil Corp., Dallas	62,673.63	84,556.88
Pe.roleum Development Co., New York	939.47	1,214.71
Peery, Thos. H., Wichita Falls	1,962.26	2,671.36
Powell, J. L., Wichita Falls	350.08	467.04
Prairie Oil & Gas Co., Independence, Kans.	173,556.70	174,514.71
Prairie Oil & Gas Co., Independence, Kans.	1,337,110.00	1,400,572.26
Perkins & Cullum, Wichita Falls	71,134.40	95,606.36
Perkins, J. S., Wichita Falls	3,765.26	5,021.76
Pennok Oil Corp., Tulsa, Okla.	27,150.80	32,472.81
Patterson, W. A., Fort Worth	2,204.94	4,362.74
Palo Duro Oil Co., Amarillo	88,212.11	86,555.94
Pianet Petroleum Co., Bartlesville, Okla.	35,920.45	48,704.54
Pilkinton, F. L., Burkburnett	3,487.01	3,862.75
Paggi Bros. Oil Co., Beaumont	16,040.14	17,388.48
Paggi Chas. Co., Beaumont	4,096.88	4,916.25
Prouucers Supply & Tool Co., Marietta, Ohio	344.30	445.71
Payne, F. G., et al, Wichita Falls	3,072.43	4,239.95
Petroleum Investment Co., Fort Worth	5,289.62	7,152.85
Pitzer & West, Breckenridge	62,200.01	88,946.01
Pantex Oil Co., Amarillo	80,750.44	76,712.92
Petroleum Producers Co., Wichita Falls	178,184.13	240,927.15
Producers Drilling Co., Wichita Falls	18,849.62	24,983.54
Pace, Geo. L., Wichita Falls	1,614.70	2,280.86
Pace & Ward, Breckenridge	3,309.65	4,334.64
Panhandle Refining Co., Wichita Falls	102,703.06	133,633.65
Portland Drilling Corp., Wichita Falls	2,051.80	2,447.50
Phillips, J. R., (Haywood lease), Amarillo	49,412.96	61,766.21
Phillips, J. R., (Currie lease), Amarillo	57,063.70	58,224.86
Phillips, J. R., (Blasdale lease), Amarillo	564.54	536.31
Phillips Bros., Beaumont, N. Y.	2,555.45	3,106.52
Phillips Petroleum Co., Bartlesville, Okla.	2,962,760.32	3,014,743.87
Q		
Quakins Petroleum Co., Ranger	6,915.34	9,430.91
Quarteret Oil Co., Tulsa, Okla.	11,386.25	15,973.11
Quincy Oil Co., Electra	199.62	241.50
R		
Roxana Petroleum Corp., St. Louis, Mo.	765,373.78	752,762.90
Ross, C. E., Burkburnett	744.94	967.78
Roberts, M. C. and S. G., Dallas	405.29	445.61
Reilef Oil Co., (3-31-27), Amarillo	26,850.96	35,931.12
Ross, H. A., Binghampton, N. Y.	1,362.95	1,808.56
Reinhart, M. J., Trustee, Oklahoma City, Okla.	764.28	1,424.56
Robinson, Arthur D., Dallas	5,708.11	8,441.25
Rayzor, J. P., Wichita Falls	433.93	458.47
Ramsey, E. H., Rising Star	5,453.68	7,566.43
Rhader & Carey, Wichita Falls	2,982.00	3,638.04
Richards, C. P., trustee, Lockhart	14,897.21	14,430.40
Rubsam & Hunter, Wichita Falls	3,676.76	4,978.29
Reinhart, M. J., Truste, Oklahoma City, Okla.	684.56	812.63
Rockdale, W. T., Oil Co., Rockdale	852.75	1,073.47
Rowe, J. G., Wichita Falls	2,250.32	2,925.45
Rolyat Production Co., Houston	7,636.65	9,088.98
Rowe, M. D., Wichita Falls	1,298.26	1,710.81
Rowan, A. H., Trustee, Corsicana	934.61	1,196.30
Rentex Oil Co., San Antonio	11,014.46	13,399.84
Rountree & Simpson, Rockdale	307.31	406.24
Reclamation Co. (The), Fort Worth	10,521.39	13,702.99
Rountree, Ramsel & Kemp, Rockdale	1,071.53	1,414.40
Rountree, White & Simpson, Rockdale	2,423.68	3,251.76
Rosson-Thomas, Mexia	1,249.59	1,649.59
Ramming, W. F., Wichita Falls	38.38	52.58
Ramming, Staley & Ramming, Wichita Falls	864.17	1,190.66
Ramming, R. W., Wichita Falls	7.09	9.56
Ross Amigos Oil Co., Laredo	11,280.36	11,280.36
Ross Segunda Oil Co., Laredo	1,338.26	1,403.17
Ramming & Saunders, Wichita Falls	7,266.92	10,362.77
Ross & Slicker Oil Co., Cisco	874.89	1,154.81
Re.ter-Foster Oil Corp., Wichita Falls	27,534.73	36,885.68
Ruby Oil Co., Minerva	209.11	294.10
Root, Rhodes et al, Eastland	40,239.00	54,883.00
Root & Rhodes, Eastland	5,280.00	7,456.00
Root C. M., et al, Eastland	6,273.00	8,481.00
Rex-Tex Oil Co., Winchester, Ky.	26,343.03	36,331.16
Rycade Oil Corp., Houston	197,173.32	231,525.57
Rio Grande Petroleum Corp., Houston	6,036.32	6,036.32
Ryan Consolidated Petroleum Corp., Bartlesville, Okla.	67,848.90	80,877.40
Ramsey & Decker, Breckenridge	4,070.04	5,870.34
Ruthada Oil Co., Oklahoma City, Okla.	15,983.85	16,765.01
Roeser & Pendleton, Inc., Fort Worth	298,769.44	393,760.53
Robinson, O. D., Pittsburgh, Pa.	1,603.32	1,603.32
Rhodes & Highers, Breckenridge	7,973.30	10,365.29
Red Bank Oil Co., Tulsa, Okla.	57,434.02	76,849.91
Red River Oil Co., Tulsa, Okla.	32,656.08	39,369.67
Rio Bravo Oil Co., Houston	833,039.84	1,031,906.14
Republic Production Co., Houston	578,341.75	680,208.19
Rockdale Devp. Co., Rockdale	2,086.17	2,605.00
Rex Petroleum Corp., Orange	44,675.48	53,622.55
Ruyle Farm Oil Co., Wichita Falls	8,481.22	12,847.96
Russell & Wilson (Predaux lease, Wichita Falls)	19,363.17	23,935.65
Ramsel, W. T., Oil Co., Rockdale	5,333.81	6,931.35
Robertson Oil Co., Batson	658.00	789.60
Robert Oil Corp., Breckenridge	10,998.45	14,484.25
Russell-Sanderson Oil Co., Inc., Fort Worth	726.55	999.75
Regna Oil Co., Saratoga	5,507.65	5,709.60
Ray, Preas & Ray Oil Co., Inc., Wichita Falls	2,517.98	3,408.83
Ray & Massie, Wichita Falls	18,890.40	27,350.23
Rockwell, J. A., & Co., Warren, Pa.	3,340.70	4,258.35
Rainer & Bailey, Wichita Falls	4,844.62	6,222.96
S		
Scott & Walker, Albany	2,650.84	3,366.57
Smith, McIntosh & Thomas, Cameron	3,421.07	4,372.04
Sebert Bros. & Barger, Mooringsport, La.	3,117.20	4,364.08

No-carbon motor oils! Think of the sales possibilities in handling CROWN Pale no-carbon motor oils.

CROWN Pales are overhead distillates, refined from a special coastal crude. Not blended with cylinder or bright stocks, they are free from carbon, paraffin wax, tarry matter and other impurities. Completely volatile at the working temperatures of the engine, they distill off clean from piston heads and cylinder walls.

To your customers, this means no carbon troubles, little if any power loss, no ignition worries, no valve grinding, greater mileage from every gallon of gas.

What better way to promote your business and build profits?

Write for samples and prices.

General Sales Office
Post-Dispatch Bldg..... Houston, Texas

Branch Sales Offices
17 Battery Place..... New York City, N. Y.
Blum Building ..... Chicago, Ill.
Security Building..... Minneapolis, Minn.
507 Land Bank Building..... Kansas City, Mo.

Refinery and Terminal, Houston, Texas
Cable Address: Crowncen, Houston

CROWN CENTRAL
PETROLEUM CORPORATION
New York-Houston

Water Tank Car—Pacific Electric Company, Los Angeles, California.
1 sprayed coat of Bitulumin.

Gasoline Retorts—Associated Oil Company, Avon Refinery, California.
2 coats Bitulumin over 250 Iron Primer.

SUNLIGHT AND MOISTURE CHIEF CAUSES OF EXPOSED METAL SURFACE BREAKDOWN

Bitulumin Deflects Harmful Ultra Violet Sunrays Prevents Corrosion From Moisture Penetration Minimizes Evaporation Through Keeping Tank Surfaces Cooler. For Many Other Purposes, Too.

Bitulumin (Aluminum Paint) resists paint's two worst enemies, sunlight and moisture. It is largely immune to harmful ultra violet rays which break down ordinary paint surface allowing moisture to penetrate.

Bitulumin forms a light-resisting, durable and moisture-proof surface, outlasting the best lead and zinc paints by two to one.

Widely used for painting oil storage, Bitulumin is equally efficient on tanks, cars, metal buildings, refinery equipment, still towers, bridges, etc.

Bitulumin, put up in double containers to insure fresh mixing, is made exclusively by Hill, Hubbell & Company, manufacturers of a special line of paints for the oil industry.

HILL, HUBBELL & COMPANY

Manufacturers of

Highest Grade Oil Industry Paints and Pipe Line Coatings

Factories: SAN FRANCISCO AND TULSA

Offices:

SAN FRANCISCO LOS ANGELES PORTLAND NEW YORK
SEATTLE TULSA HOUSTON BALTIMORE

Name and Address—	Barrels	Value
Superior Oil & Producing Co., Lexington, Ky.	2,360.78	3,110.59
Stidham & Thrasher, Electra	806.23	711.84
Sullivan, M. J., Kansas City, Mo.	394.65	431.60
Seaboard Oil & Gas Co., Wichita Falls	41,884.87	56,655.63
Swastika Petroleum Corp., Wichita Falls	1,138.75	1,555.46
Stout & Bradstreet, Cross Plains	13,540.51	18,069.06
Smith & Bynum, Amarillo	2,868.75	2,725.31
Smith, Jos. L., Estate, Amarillo	13,205.74	12,545.44
Stock, H. L., Cisco	2,883.56	4,214.86
Souligny Oil Corp., Ponca City, Okla.	2,108.87	2,317.65
Steimer & Smith, Corsicana	83.29	130.70
Sitrin, Sam & Morris, Tulsa, Okla.	271.47	469.32
Strelsky & Gamble, Rockdale	989.14	1,265.46
Skinner, E. W., Oil Co., Saratoga	4,978.76	5,974.51
Sheman Oil & Gas Co., Pittsburgh, Pa.	107.49	139.70
Shackelford Oil Co., Putnam	2,797.28	3,507.96
St. Louis Oil & Devp. Co., Wichita Falls	707.72	926.38
Stafford & Hayes, Graham	1,621.39	2,023.62
Somerset Oil Co. of Mass., Easthampton, Mass.	157.00	181.98
Staley, J. A., Wichita Falls	3,745.19	5,022.12
Spring Creek Oil Co., Amarillo	31,552.99	29,975.36
Salado Oil Co., San Antonio	2,059.74	2,553.05
San Balt Petroleum Co., Kansas City, Mo.	677.45	718.54
Sessions, I. P., Rockdale	432.43	601.95
Schlicher Oil Co., Beaumont	1,448.99	1,746.41
Schulz & Pols, Wichita Falls	762.84	1,037.48
Schaffner, Wilson et al, Wichita Falls	6,047.13	8,480.52
St. Marys Oil & Gas Co., St. Marys, W. Va.	25,189.19	28,715.09
Stratton & Duncan, Cross Plains	527.26	846.02
Sedwick Oil Co., Tulsa, Okla.	16,409.15	20,970.22
Saunders, Jno. R., Wichita Falls	38.38	50.67
Stovall, E. C., Graham	182,705.22	249,733.46
Southern Petroleum Exploration, Abilene	3,299.01	4,354.81
Sigler Oil Co., Inc., Wichita Falls	1,612.84	2,005.11
Somerset Crude Oil & Refg. Co., Somerset	4,194.35	5,072.84
Star Drilling Co., Wichita Falls	8,166.84	11,183.13
Shappell Oil Co., Wichita Falls	52,618.15	71,954.79
Saratoga Oil Co., Wichita Falls	1,992.39	2,908.88
Speed, C. D., Corsicana	237.40	273.50
Simmons, T. K., Tulsa, Okla.	1,543.73	2,701.54
Stull, R. O., Wichita Falls	17.71	23.37
Sinclair Oil & Gas Co., Houston	110,237.20	134,163.61
Swanner, Jno. L., Wichita Falls	2,530.32	3,390.62
Sink, Joel, Corsicana	174.00	193.00
Summerfield Oil Co., Tulsa, Okla.	396.16	530.88
Smith-Hanlon, Inc., Tulsa, Okla.	144.31	185.02
Sheffield, Telchow & Conkling, Houston (March 31)	1,981.36	2,681.94
Sheffield, Telchow & Conkling, Houston	1,510.69	1,813.73
Sircovich & Thomas, Houston	1,204.78	1,347.71
Sun Oil Co., Dallas	609,760.48	744,914.95
Sipe Springs Oil Co., Sipe Springs	44.88	53.86
Scarbrough, W. A., Burkburnett	3,161.53	4,404.14
Smith, E. L., Oil Co., Inc. Mexia	48,433.29	62,005.88
Slick, T. B., et al, Oklahoma City	11,338.78	16,237.99
Shaw, Fox & Adams, Burkett	3,539.47	4,072.69
Shaw, Archie, Burkett	14,865.33	18,141.33
St. Albans, Edward, Laredo	12,180.13	12,180.13
Simms Oil Co., Dallas	935,314.82	944,267.74
Southern Exploration Co., Houston	3,498.31	4,465.03
Southern Crude Oil Purchasing Co., Shreveport, La.	67,975.84	51,924.53
Schaffner, E. N., et al, Cross Plains	2,564.10	3,515.56
Somerset Oil Co., San Antonio	1,314.67	1,551.33
Stroube & Stroube, Corsicana	82,866.02	105,428.54
Swensondale Oil Co., Caddo	11,987.42	15,636.77
Sunny Jim Oil Co., Tulsa, Okla.	1,883.36	1,341.89
Stella Oil Co., Beaumont	18,557.52	22,268.92
Schermerhorn Oil Co., Tulsa, Okla.	4,235.91	5,487.56
Summit Oil & Refg. Corp., Amarillo	21,257.70	20,194.81
Shertzer Bros., Dewey, Okla.	13,858.37	18,317.47
Shaw & Rathke, Wichita Falls	45,049.25	61,307.22
Security Drilling Co., Wichita Falls	726.53	1,017.30
Silurian Oil Co., St. Louis, Mo.	4,157.75	5,508.17
Sindorf & Sindorf, Caddo	1,101.44	1,418.70
Sun-Burst Oil Co., Amarillo	13,198.96	12,734.00
Skelly Oil Co., Tulsa, Okla.	344,982.25	363,982.25
Supreme Oil Co., Orange	4,142.29	4,970.56
Sitrin, Sam & Morris, Tulsa, Okla.	249.35	318.67
Staley, J. I., & Co., Wichita Falls	6,502.15	8,606.69
Staley, Wynne & Co., Wichita Falls	72,291.63	86,234.58
Scott & Britton, Graham	245.47	319.09
Stoops, J. P., Ranger	355.88	459.73
Stephens Oil Co., Beaumont	599.03	818.82
Sheldon, W. J., Electra	4,819.02	5,952.37
Snowden & McSweeney Co., New York, N. Y.	67,251.89	80,147.59
Selby Oil & Gas Co., Tulsa, Okla.	3,938.03	5,566.15
States Oil Corp., Eastland	44,776.44	64,738.41
States Oil Corp. (March 31, 1927), Eastland	63,864.97	102,130.46
Standard Oil, Land & Leasing Co., Electra	.....	347.72
Schoolfield, R. E., Wichita Falls	153.19	199.60
Snider, C. W., Wichita Falls	1,630.60	2,255.34
Sheldon, C. P., Drilling Co., Electra	22,069.74	26,448.30
Sinclair Oil & Gas Co., Tulsa, Okla.	260,763.21	355,717.28
Shoup, O. H., Jr., Colorado Springs, Colo.	14,217.05	19,135.52
Silk, W. W., Wichita Falls	119.69	156.94
Silk, Bullington & Clark, Wichita Falls	8,247.61	7,542.81
Shuler-Davies & Co., Brownwood	2,085.89	2,458.60
Smith, M. L. V., Vernon	868.04	1,108.26
Ski-Tex Petroleum Co., Amarillo	88,495.72	84,070.88
Shasta Oil Co., Clifford Moore et al, Wichita Falls	2,819.92	3,714.38
T		
Texas Standard Oil Co., Houston	1,149.51	2,154.95
Tripplehorn, J. W. & D. R. (March 31, 1927), Fort Worth	2,964.10	5,668.92
Trinity Townsite Co., Dallas	971.50	1,378.46
Tri-Angle Oil Co. of Amarillo, Amarillo	28,748.17	27,310.77
Thaxton, W. H., Estate, Austin	316.26	373.18
Triangle Oil & Gas Co., Rockdale	3,764.16	5,040.18
Tripplehorn, J. W. & D. R., Fort Worth	3,238.04	4,246.27
Two Republics Oil & Gas Co., Laredo	10,410.27	11,269.22
Texas Oil Corp., Dallas	159.49	180.22
Texanna Oil & Refg. Co., Wichita Falls	572.18	726.91
Trimount Petroleum Co., Shreveport, La.	9,640.55	13,820.28
Taylor-Sibley Syndicate, Dallas	2,149.22	2,292.66
Texas Unity Oil Co., Dallas	5,349.36	7,797.09
Texota Petroleum Co., Electra	444.00	464.25
Texas Petroleum Devp. Co., Cameron	8,403.42	11,169.81
Trinity Production Co., Wichita Falls	505.03	702.07
Tidwell, R. V., Trustee, Graham	6,066.59	8,099.05
Travelers Oil Co., Amarillo	36,391.50	34,571.94
Trans-Bay Oil Co., Galveston	90.00	108.00
Tidwell, H. L., Trustee, Graham	991.52	1,314.64
Triangle Oil Co., Brownwood	4,040.33	5,649.32
Texas Fidelity Oil Corp., Louisville, Ky.	18,393.60	27,019.32
Talley, Oscar, Trustee, Burkburnett	414.00	567.18
Triangle Oil Co., Wichita Falls	703.00	943.48
The Texas Company, Houston	3,048,653.35	3,799,245.87
Tannehill, L. B., Albany	21,916.72	28,792.33
Triangle Petroleum Co., Inc., The, Fort Worth	2,823.24	3,834.44
Texas Pacific Coal & Oil Co., Thurber	468,630.60	480,662.21
Turman, L. G., Fort Worth	101,554.80	83,587.91
Texas Pacific Coal & Oil Co.-Other Companies, Thurber	101,209.41	133,571.55
Tillman, J. W., Humble	353.35	414.24
Teatsorth, L., et al, Eastland	5,967.21	9,009.36
Texon Oil & Land Co. of Texas, Big Lake	4,075.80	5,499.18
Timblin, W. E., Wichita Falls	180.19	257.01
Texas Consolidated Oil Co., San Francisco, Calif.	15,856.27	21,607.76
Thoil Oil Co., Beaumont	6,014.70	8,335.13
Terry, H. M., Sour Lake	10,428.11	11,992.34
Theis Oil Co., Sour Lake	5,471.93	6,566.31
Tillery, L. J., Oil Co., Inc., Beaumont	18,751.55	23,127.50
Tegler, F. E., San Antonio	350.00	525.00
Tidal Oil Co., Tulsa, Okla.	373,515.79	363,497.25
Tidal Osage Oil Co., Tulsa, Okla.	25,055.68	29,559.48
Transcontinental Oil Co., Tulsa, Okla.	6,657.45	8,725.18
Transcontinental Oil Co., Tulsa, Okla.	123,410.78	162,553.02
Texas Standard Oil Co., Houston	1,199.07	1,553.11
Tucker & Langford, Wichita Falls	57,572.80	77,835.85
Thomasson, E. M., & Co., Inc., Denver, Colo.	1,985.21	2,626.78
The Tulsa Co. (March 31, 1927), Wichita Falls	530.06	961.86
Tucker, W. B., Dallas	704.68	887.90
Tucker & Fox, Dallas	1,863.37	2,440.39
Tyson Oil Co., Sour Lake	660.02	792.02
U		
Underwood Drilling Co. (Erwin), Wichita Falls	1,459.12	1,911.44
Underwood Drilling Co. (Ward), Wichita Falls	4,042.45	5,336.03
Upham Gas Co. of Texas, Wichita Falls	359.89	455.39
U. S. Tex. Oil Corp., Dallas	2,094.63	2,677.13
Unice & Carpenter, Houston	11,636.00	13,559.82
Union Production Co., Inc., Rockdale	3,669.98	4,802.11
United Oil & Fuel Co. of Texas, Sour Lake	2,497.76	2,997.32
Unity Oil Co., Beaumont	20,325.49	24,570.00
V		
Vacuum Oil Co., Houston	5,933.39	7,083.39
Val Verde Oil Co., Del Rio	2,339.00	2,817.24
Vergate Oil Co., Tulsa, Okla.	6,925.95	9,243.44
Virginia Oil Association, Inc., Fort Worth	3,615.64	4,893.24
Van Cleave Trust, Baltimore, Md.	650.05	896.76
Valley Oil Co., Wichita Falls	18,214.46	24,763.42
W		
White, J. M., El Dorado, Ark.	140.83	178.83
White, P. J., et al, Wichita Falls	14,981.58	21,412.71
Wiles & Keech, Amarillo	2,185.69	2,076.41
Whitehall Oil Corp., Tulsa, Okla.	6,088.23	8,558.82
Wilcox, H. F., Oil & Gas Co., Tulsa, Okla.	205,012.81	215,743.41
Williams, J. F., et al, Cisco	430.24	736.85
Ward, Mrs. Fay R., Dallas	129.85	207.17
White, C. N., San Antonio	7,366.00	13,055.00
West Production Co., Houston	9,267.33	10,657.42
Williamson & Veal (March 31, 1927), Brownwood	3,561.14	6,785.94
Williamson & Veal, Brownwood	1,291.55	1,729.12
Webb Oil Co., Humble	4,331.44	5,197.72
Waggoner Refg. Co., Inc., Electra	28,079.19	35,674.58
Wakefield, M. E. et al, Cross Plains	4,212.32	5,931.86
Whitman, G. W., Wichita Falls	278.01	367.92
Weed-Gayle Oil Co., Beaumont	70,692.52	84,831.04
Wilson-King et al, Wichita Falls	17.71	23.38
West, Bessie M., Houston	1,938.00	2,325.60
Wampen Oil Corp., Dallas	2,974.86	4,283.80
Wo-Mac Oil Co., Wichita Falls	3,071.23	4,175.47
Woody, W. C., Wichita Falls	1,962.26	2,671.36
Wheelock & Collins, Corsicana	26,615.48	35,132.43
Watkins, J. A., Wichita Falls	489.31	863.98
Wilson-Broach Co., Beaumont	15,393.00	18,471.59
Wilson Drilling Co. (Rathke), Wichita Falls	4,827.03	6,799.58
Weaver & Pols, Wichita Falls	7,379.74	9,865.88
Wilson Drilling Co. (Snedeker), Wichita Falls	318.31	448.41
Wotten Reed et al, Graham	6,187.73	8,288.25
Woods & Bennett, Humble	6,806.35	8,166.60
Western Oil Corp. of Texas, Wichita Falls	25,651.28	32,460.16
Wichita Production Co., Wichita Falls	14,016.53	19,136.46
Witcher, Annie L., (guardian), Wichita Falls	2,991.46	4,423.85
Witcher & Michel, Wichita Falls	319.26	435.02
Woolridge, Good, Brownwood	650.07	782.15
Western Oil Sales Corp., Wichita Falls	19,022.47	24,951.74
Wichita Petroleum Co., Tulsa, Okla.	3,311.23	4,404.59
Weiler, J. G. et al, Cross Plains	3,092.82	4,258.87
Wallace, Chas. Wm., and Wife, Wichita Falls	40,019.69	54,756.84
Westervelt-Noble et al, Oklahoma City, Okla.	5,115.85	6,775.84
Woodburn Oil Corp., Dallas	8,055.31	9,810.86
Westeheimer & Daube, Ardmore, Okla.	1,731.71	2,320.29
Weiler, H. J., Wichita Falls	475.59	637.29
Watson, M. B., Fort Worth	1,200.00	1,200.00
Williams, Jno. H., Dallas	5,480.89	7,273.29
West, J. H., Cisco	2,885.34	3,917.18
West, J. F., Cisco	75.84	100.88
Weldon Oil Co., Saratoga	9,702.87	9,684.24
Wahpoo Oil Co., Rockdale	3,684.20	4,826.30
Wentz, L. H., Ponca City, Okla.	115,349.70	153,202.53
Wise & Jackson, Sapulpa, Okla.	3,902.80	4,788.64
Walker, B. S., Breckenridge	1,722.24	2,221.23
Williams, J. F., Cisco	451.14	567.65
Worth Oil Co., Wichita Falls	160.00	216.00
Wilson, Lee (Overby lease),	338.28	449.95
Wilson, Lee (Annie Bearden), Wichita Falls	4,403.09	6,521.24
Witherspoon Oil Co., San Antonio	48,732.19	61,011.90
Why Not Oil Co., Mexia	7,906.23	10,890.21
Wichita Production Co., Wichita Falls	1,576.72	2,081.26
White Eagle Oil & Refg. Co., Kansas City, Mo.	156,409.00	149,558.26
Waggoner, R. M., Special, Wichita Falls	3,111.40	4,393.32
World Oil Co., Fort Worth	4,312.84	3,733.31
Whaley Mineral Realty Trust, Fort Worth	4,211.88	5,624.90
Wickett, F. H., Shreveport, La.	792.16	792.16
Wood-Benton-Lesh & McCall, Nocona	15,307.24	17,513.04
Walker, Hall, Ranger	342.44	439.32
Williams, Bert, Wichita Falls	1,449.85	1,898.56
White, James H., Wichita Falls	1,680.35	2,017.45
Y		
Yount Lee Oil Co., Beaumont	3,411,161.80	4,231,431.94
Yuba Oil & Refg. Co., Nacogdoches	180.00	360.00
Z		
Zadie Bell Oil Co., Fort Worth	467.79	627.71
Totals	50,917,225.70	$58,361,742.04

E. S. POWERS DIES

OIL CITY, Pa., Aug. 20.—Edward S. Powers, aged 51 years, well known to oil men through his affiliation with the Joseph Seep Purchasing Agency for many years, died at his home in Titusville Tuesday night. Mr. Powers had been in ill health since February 6, 1918, when he was injured in the wreck of the Pennsylvania Railroad "brokers train" near Petroleum Center. The injuries sustained forced his retirement on a pension five years ago. At the age of 15 years he entered the employ of Joseph Seep and for a time worked in Titusville. He was later transferred to Oil City, where he acted as Mr. Seep's secretary for about 30 years. When the offices were merged at Pittsburgh, Mr. Powers went to that city, but retired shortly after. He is survived by three brothers, C. C. Powers, Tulsa, Okla., and F. H. and T. J. Powers of Titusville. One sister, Miss Mary L. Powers, of Titusville, also survives.

PENNSYLVANIA MARKETS

OIL CITY, Pa., Aug. 22.—There was no change in naphtha during the past week and gasoline continued in good demand both at wholesale and retail in the Pennsylvania refined market. Motoring was heavy and actual consumption of motor fuel great. Kerosene continues in good demand and much is being used in harvesting. Neutrals still are brisk with demand good. Wax is moving fairly well but with no price changes. Fuel oil was in good demand. Bright stocks are now very strong. Cylinder stocks were fair but not moving in any great quantities.

MAY RESTORE BARCO CONCESSION TO GULF

NEW YORK, Aug. 20.—The Colombian Senate, now in session, has under discussion the question of restoring the Barco oil concession to the Gulf Oil Corp. It is said here the discussion indicates an early decision favorable to Gulf.

River transportation on the Magdalena has opened up once more after being held up several months during the dry season. Material is moving inland preparatory to drilling on several concessions. Gulf is expected to spend $10,000,000 to $20,000,000 in Colombia provided the Barco decision is favorable.

Andean National Corp.'s second pipe line in Colombia is finished and it is understood oil is being run through it.

NATIO
PORTA
DRIL
MACH
No.3 Machine
Rated Capacity
3500'
COMPLETE SPECIFICATIONS
ON REQUEST
NATIONA
COMP

TIONAL

TABLE
LLING
CHINES

No.2 and 2A
Machines
Rated Capacity 2500'

COMPLETE SPECIFICATIONS
ON REQUEST

THE
NAL SUPPLY
OMPANIES

PARMACO
PARKERSBURG MACHINE CO.
PARKERSBURG, W. VA. U.S.A.

For—

Packers

Stuffing Box Casing Heads

Casing Shoes

Write to

PARKERSBURG MACHINE CO.

PARKERSBURG, W. VA.

"The House of Courteous Service"

SUMMARY OF CALIFORNIA OPERATIONS FOR JULY, 1927

According to figures collected by the American Petroleum Institute, Pacific Coast office, the total production of crude oil in California for July amounted to 19,319,021 bbls., an average of 623,194 bbls. per day. This is a decrease of 16,187 bbls. per day under June production.

Total stocks of crude and all products in Pacific Coast territory decreased during the month 1,023,700 bbls. The total stocks at the end of the month were 144,759,505 bbls. The total stock decrease for 1927, up to July 31, was 852,671 bbls.

Seventy wells were completed during the month with an initial daily production of 31,480 bbls., compared with 96 wells completed during June with an initial production of 64,201 bbls.

PRODUCTION

(Figures of production and stocks are in barrels of 42 gallons)

District—	Barrels per month	Daily average July,'27	June,'27	July,'26
Kern River	501,470	16,176	15,664	11,297
Mount Poso	1,054	34	61	.....
Round Mountain	500	16	180	.....
McKittrick	155,036	5,001	5,195	5,332
Midway-Sunset	2,674,431	86,272	89,651	93,964
Elk Hills	800,071	25,809	25,012	32,948
Lost Hills-Belridge	114,569	3,696	3,797	4,605
Coalinga	609,036	19,646	19,842	19,908
Wheeler Ridge	31,278	1,009	1,039	1,065
Watsonville	1,782	57	58	58
Santa Maria	177,991	5,742	5,563	4,786
Summerland	4,230	136	141	129
Goleta	10,003	323	369	.....
Ventura Avenue	1,182,519	38,146	37,497	43,025
Ventura-Newhall	189,423	6,110	5,950	6,007
Los Angeles-Salt Lake	53,037	1,711	1,783	1,842
Whittier	53,452	1,724	1,775	2,038
Fullerton (Brea-Olinda)	553,484	17,854	16,903	17,040
Coyote	419,355	13,528	13,742	16,607
Santa Fe Springs	1,280,689	41,313	42,006	48,900
Montebello	448,085	14,454	15,193	18,498
Richfield	705,746	22,766	21,988	14,388
Huntington Beach	2,156,403	69,561	73,147	43,732
Long Beach	2,867,493	92,500	92,461	106,142
Torrance	706,454	22,789	23,343	28,208
Dominguez	494,472	15,951	15,914	20,951
Rosecrans	272,067	8,776	9,350	15,618
Inglewood	1,063,408	34,303	34,371	46,504
Newport	817	26	39	28
Seal Beach	1,790,667	57,763	66,338	.....
Total	19,319,021	623,194	639,381	604,619
June	19,181,442	639,381	.....	.....
Decrease	*137,579	16,187	.....	.....

*Increase.

STOCKS

	July 31, 1927	June 30, 1927	July stock decreases	July 31, 1926
Heavy crude, heavier than 20° A. P. I., including all grades of fuel	93,073,707	91,878,389	*1,195,318	88,362,629
Refinable crude, 20° A. P. I., and lighter	25,639,883	27,175,071	1,535,188	33,548,115
Gasoline	12,846,249	13,496,541	650,292	10,450,418
Naphtha distillates	3,413,614	3,517,038	103,424	4,955,313
All other stocks	9,786,052	9,716,166	*69,886	10,685,297
Total all stocks	144,759,505	145,783,205	1,023,700	148,001,772

*Increase.

DEVELOPMENT

District—	New rigs up	Active drilling	Completed	Daily initial output	Active producing	Abandoned wells—Drillers	Abandoned wells—Producers
Kern River	10	15	10	1,321	1,288	..	..
Mount Poso	..	..	..	.....	1	1	..
Round Mountain	1	1	..	.....	1	..	..
McKittrick	..	..	..	.....	311	..	..
Midway-Sunset	..	7	3	621	2,976	..	1
Elk Hills	..	..	..	.....	231	..	..
Lost Hills-Belridge	..	2	..	.....	242	..	..
Coalinga	..	3	1	10	980	..	..
Wheeler Ridge	..	..	1	104	29	..	..
Watsonville	..	..	..	.....	6	..	..
Santa Maria	1	4	..	.....	223	..	..
Summerland	..	2	..	.....	92	..	..
Goleta	3	5	2	535	5	..	..
Ventura Avenue	4	18	3	2,983	82	..	..
Ventura-Newhall	3	26	1	225	508	5	..
Los Angeles-Salt Lake	..	..	..	.....	339	..	..
Whittier	..	..	..	.....	183	..	..
Fullerton	..	7	1	250	379	..	..
Coyote	..	5	..	.....	210	..	..
Santa Fe Springs	..	1	..	.....	333	..	1
Montebello	..	3	..	.....	184	..	..
Richfield	7	18	7	1,839	240	1	1
Huntington Beach	24	43	13	3,924	56	..	1
Long Beach	8	14	1	1,105	66	1	8
Torrance	3	1	1	50	658	..	..
Dominguez	..	..	1	489	78	..	..
Rosecrans	..	1	..	.....	119	..	2
Inglewood	2	1	2	510	222	..	..
Newport	1	1	..	.....	3	1	..
Seal Beach	3	45	23	17,514	126	2	..
Miscellaneous drilling	8	122	..	.....	.....	6	..
July	78	345	70	31,480	11,279	17	14
June	79	396	96	64,201	11,240	26	18
Decrease	1	51	26	32,721	*39	9	4
Average for year 1926	95	422	76	32,635	11,288	24	17
Average for year 1925	105	417	79	42,247	11,393	28	12
Average for year 1924	103	510	103	42,412	10,903	28	21
Average for year 1923	111	759	82	114,690	8,928	24	
Average for year 1922	115	605	67	43,700	9,410	17	

*Increase.

PECOS TO DECIDE PRORATION SEPTEMBER 2

(Continued from Page 41)

also absent. Gulf is now surveying for a pipe line from its present trunk system to take care of its Pecos needs, and accordingly will not be a customer of the Humble line. However, it has shown by its operating policy in the past that it is not its disposition during the period of overproduction to force neighbors to drill for oil they do not need, contenting itself in drilling to protect its properties.

The meeting was called in view of the fact that the Humble, which has the only trunk line system affording an outlet, is soon to increase its present handling capacity, and by October 1 will have an entirely new line from the field to tidewater at Corpus Christi. The latter line will give it a capacity of 30,000 bbls. per day for Pecos County.

The purpose of the meeting was to make a fair allotment of that capacity among all producers, and also to bring to the minds of these producers what they can expect in the way of a trunk line outlet. In addition to the Humble, Illinois Pipe Line Co., a corporate ally of Mid-Kansas, has two lines from the field to McCamey. The limit of the capacity of these lines, however, is set by the amount the Humble's trunk line system can take at the latter place, which at present is some 5,000 bbls. daily.

The potential and actual production represented at the meeting was as follows:

Company—	Potential	Present Prod.
McMan Oil & Gas	3,000	300
Marland Oil	10,000	300
Allsman & Bell Co.	300	300
California Oil	8,000	300
Mid-Kansas O. & G., 75,000 to	100,000	6,000
Total	126,300	7,200

There are 13 wells in the field.

It developed during the discussion that the pool has been defined for about 2 miles east to west and 1 mile north to south.

Mr. Farish stated his company is now laying a line of 10 and 12-inch pipe from McCamey to Ingleside, across the bay from Corpus Christi, which it is expected will be completed early in October. It will have a capacity of 40,000 bbls. per day, which will later be increased to 50,000 bbls. by the addition of loops. Another line from McCamey to Comyn will be in operation by October 1 next.

This will give the company a pipe line capacity of 90,000 bbls. per day from the west Texas fields, of which 30,000 bbls. will be allocated to the Yates Pool in Pecos County, since the company must also take care of producers in Crane, Upton, Winkler and other counties.

The Humble Pipe Line Co. is now taking a limited amount of Pecos County oil through the line of the Illinois Pipe Line Co., delivered at McCamey. A small line is being laid from McCamey to Kemper, which will be the junction point for the field gathering lines, just as Comyn is the junction at which the line from the Panhandle joins the north central Texas trunk system, which comes through to the Gulf Coast, with connections to Mexia and Powell Fields.

In addition to the pipe lines now being laid by the Humble Oil & Refining Co., it is also erecting 1,000,000 bbls. of steel storage at Kemper and other places to facilitate handling production.

The Gulf Pipe Line Co. is making a survey for a 35-mile extension of its 8-inch line from McElroy ranch in Crane County to the Yates Field, but it is reported it will not be available for general use as a transporter.

The Illinois Pipe Line Co. has started preliminary work on the 190 miles of 8-inch line to Del Rio on the Southern Pacific Railroad, but it will probably be December 1 before it will be available for transportation of crude. The company is now erecting 2,000,000 bbls. of steel storage at Del Rio.

Mr. Farish explained the constructive program of the Humble Pipe Line Co., a subsidiary, which is spending between $10,000,000 and $12,000,000 on new lines and extending old systems, and said, in view of the general overproduction, it was the opinion of the officials of the Humble Oil &Refining Co. that 30,000 bbls. represented the extent of the present market for Pecos County crude. It was their desire that this be shared equitably with the various producers, which would require prorating of runs and purchases.

The Humble executives desired that the companies affected work out some equitable plan among themselves and submit it at the Fort Worth meeting. The Humble company preferred to adopt this method of finding a solution of the problem, rather than make an arbitrary ruling.

The meeting was harmonious. Just how long the prorating will remain in operation is conjectural, but that some plan will be proposed and adopted is predicted. Much depends upon the lease obligations. Most of the land was purchased by the owners from the State of Texas at low figures on long term payments. It had only a nominal value until the discovery of oil.

It is believed that some such plan as is now in operation in the Seminole Field will be devised, with an umpire to supervise operations and prorate the runs until conditions become normal.

The Humble Oil & Refining Co.'s refinery at McCamey is running an average of 10,000 bbls. per day from the west Texas fields.

REFINERY
Consulting
Financing
Engineering
Remodeling
Development
Construction
SERVICE

A WIDENING of an OLD SERVICE

For the past 70 years Graver has served, as a manufacturer, every branch of the petroleum industry—producing—refining—marketing.

During these years of close association with the Industry many refiners have taken advantage of Graver's widespread experience by requesting Consulting and Engineering Service.

These many requests for work of this specialized nature have required the formation of a Refinery Division, whose work will be solely devoted to refinery problems. The personnel of this division consists of those men who have in the past handled this work for Graver, together with other experienced refinery engineers and technologists.

The function of the Refinery Division is to work in all capacities in the building of any single item of refinery equipment—the remodeling of a plant—the building of a complete plant—the development of new devices and methods. It is prepared to arrange the financing of new equipment. Recommendations of the Refinery Division are covered by a positive guarantee of results.

Any requests for further information will not obligate you.

~ REFINERY DIVISION ~

GRAVER Corporation

Founded 1857

844 Rush Street ~ Chicago

NEW YORK TULSA HOUSTON LOS ANGELES

Plant --- East Chicago, Indiana

SOUTHWEST WILDCATS

(Continued From Page 54)

ing at 3,200 feet. O. W. Killam's No. 2 Billings, SE NW Survey 712, located 450 feet to NW corner, is drilling at 2,495 feet.

Bexar County

A. R. Beal, Trustee, No. 1-A Ackerman, Survey 133½, is drilling at 815 feet. Humble Oil & Refining Co.'s No. 2 Yturri, A. Stafford Survey, 2,200 feet to west line and 750 feet to south line, is drilling at 600 feet.

Bee County

D. Hewitt's No. 1 G. A. Ray, located 1½ miles west of Pettus, is shut down at 1,400 feet. Nichols & White's No. 1 Hicks, Block 19, NW corner, is shut down at 1,408 feet. Red Ant Oil & Gas Co.'s No. 1 Perry & Chestnut, B. Q. Hadley Survey, 450 feet to east line and 1,600 feet to south line of farm, is shut down after spudding in.

Caldwell County

Calco Petroleum Co.'s No. 2 Thomas, 600 feet southeast of No. 1 at 1,644 feet total depth, casing set at 1,524 feet, made 2 bbls., and will be carried to the Austin chalk. Sutton & Smith's No. 1 Carter, Green Hindes Survey, 150 feet to CWL, is standing at 2,597 feet; No. 2 Carter, G. Hindes Survey, 300 feet east of No. 1, is location; No. 1 J. L. New, James Hindes Survey, at 150 feet to west line and 600 feet to south line, is drilling at 2,300 feet.

DeWitt County

Empire Southern Oil Co.'s No. 2 Smith, Survey 3, located three-fourths of a mile west of No. 1, is drilling at 2,625 feet, with log running lower than the No. 1. McNeil & Matthews' No. 4 Kaiser, A. Dillard Survey, 1,508 feet to NW corner, is drilling at 3,800 feet on boulder. Williams & Gates' No. 1 Gohmert, G. W. Brooks league, 175 feet to north and 300 feet to east line, is drilling at 760 feet.

Dimmitt County

Humble Oil & Refining Co.'s No. 1 City National Bank, Survey 654, located 700 feet to north line and 2,000 feet to east line, is drilling at 3,250 feet.

Fayette County

Magnolia Petroleum Co.'s No. 1 Fordtran, J. R. Jones Survey, 200 feet to northeast and 1,050 feet to west lines, is drilling at 2,873 feet.

Goliad County

Houston Oil Co.'s No. 1 J. F. Lott, G. Cortinas Survey, 2,000 feet to north and 300 feet to west lines, is rigging up; No. 4 Pettus P. Trevino Survey, is location. 1,200 feet southwest of No. 2. C. W. Simpson's No. 1, located 12 miles southeast of Yorktown, is ready to spud in.

Hays County

J. E. Rodgers' No. 1 Hohenburg, 2½ miles east of San Marcos, at 1,740 feet, is drilling, after setting casing at 1,700 feet and getting a small amount of oil.

Karnes County

Maurer & Ellis' No. 1 Henke, 500 feet south of railroad and 600 feet to east line of track, is moving in machinery. Reynosa Oil Corp.'s No. 2 Butler, Block 43, located 1,000 feet south of No. 1, made small amount of gas at 1,947 feet on the pump, and is drilling deeper.

Kerr County

Walker-Van Duyn's No. 1 Leight, Survey 38, located 500 feet north of river and 150 feet south of railroad, has resumed drilling.

Kinney County

Havelin Oil Co.'s No. 1 Weatherby, Section 21, Block 5, is shut down at 4,330 feet for repairs. W. A. Stephens and others' No. 1 Jim Clamp, Survey 346, is drilling below 1,000 feet.

Lavaca County

M. L. Benedum's No. 1 Russek, J. G. Reynolds Survey, Block 38, located 1,050 feet to west and 210 feet to south line, is drilling at 1,345 feet.

Lee County

Alberts, Glass and Willis' No. 1 Henderson, William Mock Survey, 3,960 feet to west line and 1,350 feet to south line, is drilling at 885 feet, with little gas at 675 feet.

Live Oak County

Henderson Coquat's No. 1 G. P. Henderson, located 2,640 feet west line of Reagan estate, drill stem test at 400 feet showed 2,000,000 feet, total depth 873 feet. Delta Oil Co.'s No. 1 McNeil, Jane Curry Survey, 4,000 feet to NE corner, is standing at 530 feet. R. P. Lightfoot's No. 1 Thomas, Survey 963, Block 19 west central, is drilling deeper, total depth 1,316 feet. Simmons Oil Co.'s No. 4 Sartain, is shut down at 2,303 feet to change rigs. J. W. Walton's No. 1 Roberts, west of Three Rivers, is pulling casing at 1,860 feet to drill deeper.

Medina County

California-Medina's No. 1 Rothe, Survey 1,012, center, is drilling at 3,270 feet. R. P. O'Brien's No. 1 Nixon, Survey 531, is standing at 1,007 feet with rig moved off, though other parties are interested and may complete the test. Cecil Switzer's No. 1 Zerr, Survey 459, west central, at 3,485 feet, went out of sand into cavey soft red formation and into mixture of shale and lime. Claim to have 2,600 feet of lime, 400 feet of shale from 3,028 to 3,485 feet.

Maverick County

Johnstone & Hout's No. 1 Whipff, 9 miles from Eagle Pass, is shut down at 1,220 feet. Ryan Consolidated Petroleum Co.'s No. 1 Indio, Survey 14, center, is at 1,380 feet. Rycade Oil Corp.'s No. 1 Chittim, Section 129, Block 7, is fishing at 5,630 feet; No. 2 Chittim, Section 158, Block 7, is rigging up; No. 2 Sullivan is drilling at 4,330 feet.

Milam County

Coffield-Hale's No. 2 Stephens, James Reese Survey, 10 feet from No. 1, is drilling at 1,450 feet. Groneman Brothers' No. 1 King, Houston & Prewitt Survey, is at 2,800 feet and caving badly, trying to go to the chalk. W. A. Jones, No. 1 Casparis, 960 feet from No. 1 Smith, is drilling; No. 2 Smith, offset on the east to No. 1, is drilling; Yegua Oil Oil Co.'s No. 1 Richards, J. H. Smith Survey, is shut down at 2,290 feet for water.

McMullen County

Nelson & Woods' No. 1 Shiner, Survey 48, Block 74, is drilling at 1,580 feet. George Pickett's No. 1 Jacob, Survey 7, located 660 feet to CNL, is standing at 3,030 feet.

San Patricio County

J. M. Davis' No. 1 Welhausen & Driscoll, center Lot 8, Section 68, is drilling at 1,000 feet, with gas show at 784 feet. Houston Oil Co.'s No. 1 Ragsdale, J. N. Seguin Survey, is location 300 feet to SE corner; No. 1-A Sun Oil Co., Block 8, A. S. Taft Survey, located 200 feet to south line and 250 feet to east line, has set 10-inch surface casing. Huber & Crawford's No. 1 Mathis, Block 17, at 300 feet to northwest lines and 2,500 feet to southwest lines, is shut down at 2,516 feet. Mission Drilling Co.'s No. 1 Harwood, SE corner of tract, is rigging up. National Oil Co.'s No. 1 Sullivan, J. C. McMullen Survey, 500 feet to SW corner, is rigging up. John Sigmund's No. 7 Wallace Robinson is fishing at 4,012 feet.

Zavala County

J. G. Pundt's No. 1 West, Fuentes Survey, NW corner, is drilling at 328 feet. B. F. Thompson's No. 1 West, northern part of county, is drilling at 228 feet.

OKLAHOMA FIELDS

(Continued from Page 50)

cor. SW Section 19-23-3w, is spraying oil with 4,500,000 feet of gas from a depth of 5,625 feet. This is believed to be from the Siliceous lime.

On the Payne-Lincoln County line the Willis Oil & Gas Co.'s No. 1 Gum, NW cor SE Section 20-7-3, had one bailer of oil an hour from sand 4,636-44 feet.

West of Henryetta, in Okfuskee County, the Riverland Oil Co.'s No. 1 Quincy Barnett, NE cor. NW NW Section 19-11-11, has found the Wilcox sand productive and is making 50 bbls. an hour from sand 3,643-50 feet. This company has made a specialty of going over old territory and finding small Wilcox "pimples" as they are termed.

Seminole Production

The detailed production of the Greater Seminole area by companies and leases on Friday, August 19, was as follows:

Bowlegs

Company and Farm—	Wells	Prod.
Amerada, Rasco	8	6,595
Atlantic, Baker	4	2,230
Fleet	4	2,515
Grayson	1	2,271
Jones, C.	1	2,830
Atlantic & Denver, Jones, A	4	270
Barnsdall, McNac	1	60
Murrow	3	1,546
Carter, Bowlegs	2	2,295
Harjoche	6	3,615
Hilly	1	2,010
McGeisey	1	...
Walker	2	1,355
Wise	9	11,165
Empire, Lacy	6	2,392
Wise	1	2,645
Gypsy, Bowlegs	1	40
Brown	1	115
Cumsey	1	...
Walker	7	3,515
Wise	2	...
Independent-Marland, Coker	1	609
Ind.-Terr., Barnett	2	1,888
Billington	2	1,388
Bowlegs	6	5,618
Davis	3	2,297
Fay	1	1,905
Goforth	9	5,429
Livingston	12	13,967
Lizzie	1	613
Walker	8	4,762
Wilmont	4	4,024
Work	1	1,044
Youngblood	4	1,205
McColloch, Bowlegs	2	527
Mid-Continent, Baker	4	4,156
Bowlegs	1	1,045
Hutke	1	5
Minnehoma, Bowlegs	4	3,557
Prairie, Gahagan	2	1,380
Harber	6	6,580
N. Templeton	1	3,460
Whitney	4	1,520
Pure, Reed	14	14,404
Strothers "D"	1	730
Strothers "E"	1	15
Strothers "F"	1	375
Roxana & Houston, Taylor	5	3,469
Shaffer, Lacy	3	1,650
Sinclair, Adam	1	5
Bowlegs	1	145
Ellen	2	1,635
Harjo	3	3,025
Jones	4	7,235
Taylor	3	3,125
Walker	4	3,945
Texas, Reed	7	8,485
Tidal, Harjoche	4	2,235
Twin State, Jones	1	2,165
Total	201	167,086

Little River

Ind.-Ter. Oil Co., House	1	8,038

Earlsboro

Amerada, Anderson	4	4,195
Cowden	4	6,620
Barnsdall, Brown	1	4,445
Cudjo, C.	1	30
Davis, D.	2	2,515
Davis, J.	2	216
Davis, M.	3	2,976
Gibson	6	14,242
Hearn	1	23
Hooley	1	153
Ingram	1	...
Pack	2	1,563
Peter	3	1,043
Sango	1	145
Sebolka	1	3,112
Sullivan, H.	1	180
Sullivan, N.	2	59
Smith	1	25
Wasutke	2	2,040
Carter, Payne	1	1,260
Sango	1	190
Continental, Spencer	1	6,645
Crosbie, Bryant	2	5,280
Empire, Edmundson	1	3,933
Gypsy, Bora	1	...
Carter	3	427
Earl	1	...
McFarland	2	115
Noble	1	2,550
Peter	3	1,365
State	1	1,215
Strain	1	10
Independent, Bruner	1	30
Gaines	1	2,928
Knapp	3	2,920
O'Dell	4	7,000
Sullivan	2	160
Inter-Ocean, Payne	1	304
Magnolia, Bryant	3	4,833
Edmundson	1	1,527
Holmsley	5	10,295
Ingram	1	21
Lena	2	278
Seay	3	1,490
Simpson	2	121
Sparks	3	2,424
Mid-Continent, McCumber	4	4,500
Mid-Kansas, Alderidge	1	70
Phillips, Dunnaway	1	40
Graham	6	3,082
Philmack, Dobbs	2	...
Prairie, Baker	1	50
Davis	3	4,025
Graham, C.	1	4,710
Graham, O.	2	1,960
Stidham	5	5,915
Roxana, Hearn	1	188
Spencer	2	5,452
Sinclair, Foreman	1	25
Skelly, Spencer	1	8,740
Texas, Brown	1	36
Rodgers	1	9,215
Wilmont	1	162
Tidal, Watkins	3	7,450
Twin State, Barker	1	2,953
Hearn	1	3,405
Total	134	162,862

Seminole

Carter, B. Carter	2	210
J. Carter	3	63
F. Carter	3	130
R. Cudjo	4	840
W. Cudjo	2	145
Gilliland	2	340
Grisso, W.	6	880
Knapp	3	1,195
Killing, M.	12	9,625
Killing, G.	4	1,710
Lukes	7	1,660
Ponder	1	120
Simpson	2	225
Strother	3	1,085
Vierson	4	560
Amerada, Fixico	4	1,362
Killing	4	257
Rentie	3	918
Atlantic, Cudjo, N.	4	655
Barnsdall, Carter	9	4,174
Henry	2	739
Jones	4	1,222
Empire, Gross	2	1,652
Wilson	3	446
Gypsy, Butler	3	633
Carter	8	1,530
Cudjo	4	710
Fixico	5	198
Harjo	3	1,283
Wolf	7	407
Independent, P. Fixico	4	310
Harjo	2	682
Independ. & Garland, T. Fixico	8	522
Indep. & Inter-Ocean, Jones	4	495
Ind. Terr., Bowlegs	10	3,803
Gooden	4	274
Harjo	4	555
James	4	1,047
Reed	3	32
Kingwood, Johnson	5	1,634
Magnolia, Cheparney	1	744
Franks	4	688
Mid-Continent, Rentie	9	1,445
Tayeche	7	375
Mid-Kansas, Jacksey	1	...
Pressley	1	68
Wilkins	1	539
Phillips, Strothers	3	310
Philmack, Butler	3	3,426
Prairie, Gross	5	55
Mason	1	902
Spencer	1	15
Strother	8	560
Pure, Strother, A.	17	2,853
Strother, B.	4	4,331
Strother, C.	1	61
Roxana, Harber	2	287
Lashley	2	175
Sinclair, Carter	2	30
Cudjo, A.	6	1,220
Cudjo, B.	3	565
Dicey	2	710
Fixico	4	586
Slick, Cudjo	3	984
Franks	8	1,744
Giblet, Sam	2	2,397
Superior, Cudjo	4	816
Texas, Mayhue	1	250
Strothers	2	...
Tidal, Carter	5	1,405
Fixico	8	338
Harjo, D.	1	900
Harjo, T.	6	220
Mahardy	3	555
Tayeche	2	...
Turman, Cudjo	4	1,242
Grisso	1	307
Jones	4	1,218
Total	313	76,256

Searight

Carter, Davis	5	5,010
Frazier	5	5,060
Kiker	1	30
Scott	1	35
Gypsy, Cudjo	2	643
Mid-Continent, Grayson	6	1,405
Soloche	2	1,555
Prairie, Cannon	1	17
Carter	1	10
Houck	1	7
Kincaid	8	1,765
Wiemer	1	15
Pure, Aldridge	2	5,515
Roxana, Strother	2	3,340
Sinclair, Polly	2	1,565
Twin State, Varnum	1	795
Wilcox, Chupco	4	2,870
Total	45	29,637
Total Bowlegs	201	167,086
Total Little River	1	8,038
Total Earlsboro	134	162,862
Total Seminole	313	76,256
Total Searight	45	29,637
Grand total	694	443,879

Beckham County

J. S. Nelson's No. 1 Adams, SW cor. NE, Section 35-9-25w, has been abandoned at 2,550 feet.

Carter County

Magnolia Petroleum Co. is building rig for No. 1 Gaberial, NW cor. SW, Section 23-1s-3w. Humble Oil & Refining Co. is building the rig for No. 2 Ratcliff, SE cor. NW NW, Section 29-1s-3w.

Creek County

Skelly Oil Co. made location for No. 1 Bruner, SW cor. SE SW, Section 10-15-8. Gled Oil Co. has the rig on the ground for No. 8 Ross, SW cor. SE SW, Section 13-19-8. Hemlock Oil Co. has moved a machine on for No. 1 Tate, CNL SW SW, Section 35-18-10. Dixie Drilling Co.'s No. 2 Goat, CSL SW NE, Section 31-18-11, is spudding. O. M. Irelan has the rig on the ground for No. 3 Farley, NW cor. SE NE, Section 13-17-10. Pontiac Oil Co. has the rig up for No. 8 Fulsom, NE cor. NW SW, Section 13-17-10. The rig is up for No. 9 Fulsom, CEL SW SW, Section 13-17-10. Ted Ray Oil Co. has built the rig for No. 7 Brink, CWL SE SW, Section 13-17-10.

Sidwell Drilling Co.'s No. 1 Allen, SE cor. SW NW, Section 11-19-7, is dry and abandoned at 3,010 feet. J. B. Grieves' No. 1 Porter, SE cor. Section 12-19-8, is a dry hole at 2,452 feet. Gled Oil Co.'s No. 1 West, NE cor. SW NW, Section 17-18-9, was shot with 140 quarts in the Wilcox sand 3,160-90 feet and made 10 bbls. Sherry and others' No. 1 Berryhill, SW cor. NW SE, Section 4-18-10, an old well, was deepened to 2,745 feet and abandoned. Foos and others' No. 1 Townlot 7 and 8, Block 31, Section 6-18-12.

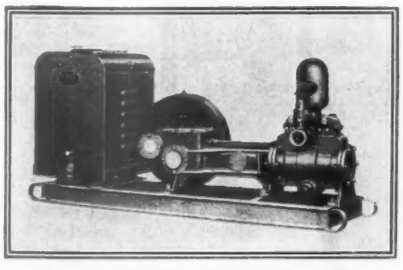
The Novo E W Duplex **Flud Oild** *double acting Pressure Pump—for either oil or water. 50 to 160 bbls. per hour, up to 400 pounds pressure. Clutch comes as standard equipment on outfits powered with 4-cylinder engines. Equipped with spring loaded valves when ordered for oil pumping.*

An Entirely New Line of Pressure Pumps—*Flud Oild* For Longer-Lived Pumping Ability and Lower Costs

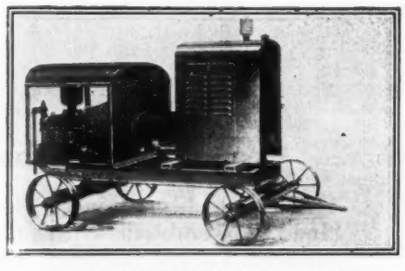
If you're looking for pressure pumps that can run day after day without trouble, without high operating costs, and without costly repairs and replacements—for pumps that can handle any capacity from 21 to 160 barrels per hour over any distance from 10 feet to 10 miles—*inspect the new Novo Flud Oild Series.*

Every single working part of these three new pumps is enclosed in an oil-tight, dirt-proof case. Oil under pressure *automatically floods every moving unit.* There is nothing for human hands to regulate, no guesswork, practically nothing to get out of order.

Flud Oild guards every gear, every bearing, every cross head—keeps the hazards of wear and the power wastes of friction reduced to a minimum. It makes these new Novo Pressure Pumps capable of operating for hours at a time with little or no attention. And it virtually guarantees longer-lived pumping ability and lower costs. Send the coupon below for detailed story on the new Novo Flud Oild Series.



The Novo E U Single Cylinder double acting **Flud Oild** *Pump for handling water at high heads. 21 bbls. per hour at pressures from 300 to 400 pounds. Has special hydraulic packing.*



The Novo **Flud Oild** *Triplex for heavy pumping. 114 to 160 bbls. per hour — from 300 to 500 pounds pressure. Clutch comes as standard equipment.*

NOVO ENGINE COMPANY, 240 Porter Street, Lansing, Michigan

C. E. BEMENT, Vice-Pres. & Gen. Mgr. Service parts and sales in over 60 cities

THE NEW NOVO FLUD OILD PUMPS

Pressure, Diaphragm, Centrifugal Pumps

Also Engines and Hoists

Novo Engine Co.,
240 Porter Street, Lansing, Michigan.

Please send me the detailed story on Novo Flud Oild Pressure Pumps.

Name .....

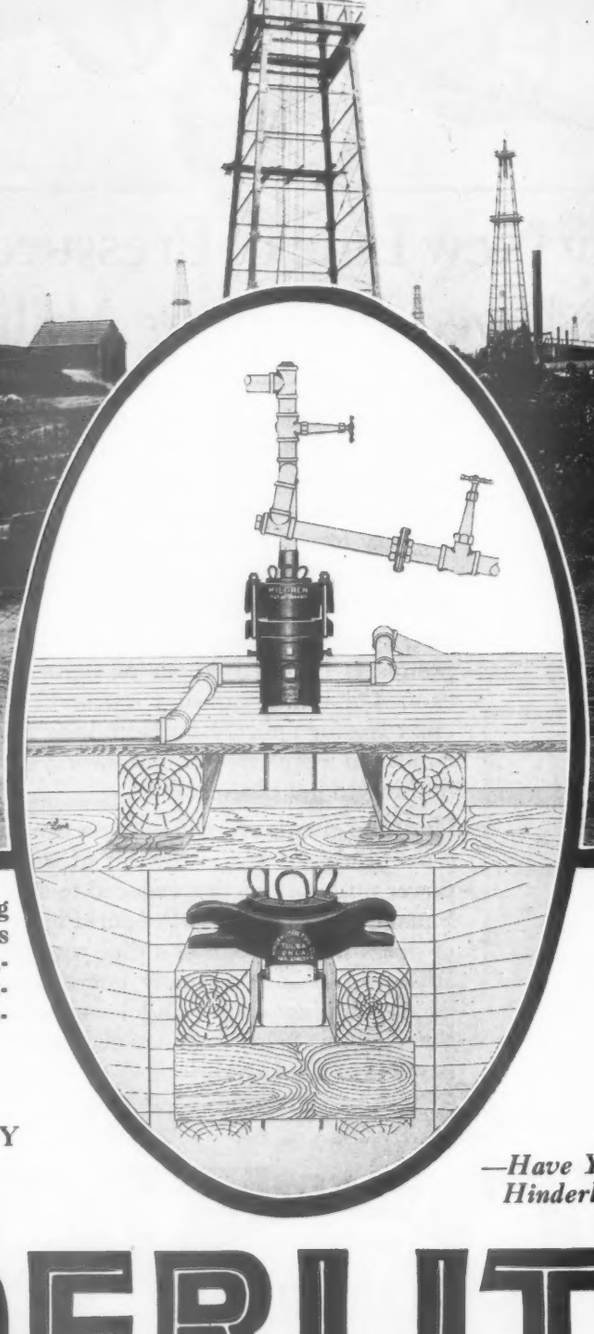
Address .....

City .....

State .....

I am interested in a pump that will handle ..... bbls. per hour.

The NEW Hinderliter HIGH-PRESSURE Equipment



The Hinderliter Forged Steel Casing Head, assembled with the famous Mildren Tubing Support, makes an installation that safeguards the investment dependent upon high pressure installations.

"The Biggest Little Tool Company In the Oil Country"

HINDERLITER TOOL COMPANY
Tulsa, Oklahoma

Manufacturers of and Specialists in Drilling and Fishing Tools

—Have Your Wells Hinderliterized!

HINDERLITER

was completed in the Hominy sand at 2,182-94 feet for 25 bbls. after shooting 10 quarts. O. M. Irelan's No. 2 Farley, SW cor. NE SE Section 13-17-10, made 60 bbls. in the Dutcher sand at 2,447-56 feet. No. 1 Griswell, NE cor. Section 11-17-10, is dry and abandoned at 2,496 feet in the Dutcher sand. M. P. Evans' No. 1 S. Collins, NE cor. SW Section 7-15-10, is dry in the Wilcox sand at 3,400-3,446 feet. Pax Oil Co. and others' No. 3 Thompson, CSL SE NW Section 13-15-10, is dry and abandoned in the Wilcox sand at 3,116-21 feet. Atlantic Oil Producing Co.'s No. 3 J. Bear, NW cor. SE NW Section 16-14-10, was completed for 90 bbls. in the Misner sand at 3,224-30 feet.

Grady County

Meridian Gas Co. has built the rig for No. 2 Woods, NW cor. NE NW Section 2-4-8w. Oklahoma Natural Gas Corp. is rigging up rotary at No. 2 Dryden, SW cor. NW Section 2-4-8w. Magnolia Petroleum Co. made location for No. 1 Ramsey, C NW NE Section 10-4-8w. Marland Oil Co. made location for No. 4 Burke, SW cor. NW SW Section 16-3-5w. No. 1 Burke, NE cor. SE Section 17-3-5w, Carter-Knox Pool, is rigging up to deepen.

J. B. Nichols' No. 1 Ridgeway, NW cor. NE NE Section 35-4-8w, has been abandoned at 3,085 feet. Carter Oil Co.'s No. 5 Walford, SW cor. SE Section 16-3-5w, had sand from 1,780 feet to 1,810 feet and made 202 bbls. No. 1 Woods, SE cor. NE NE Section 17-3-5w, is swabbing 180 bbls. from sand at 2,269-83 feet. No. 1 C. Kerans, SW cor. NE SE Section 21-3-5w, drilled to 1,690 feet and plugged back to 1,524-30 feet where it is swabbing 30 bbls.

Hughes County

Josey Oil Co.'s No. 1 Deere, SE cor. NW NE Section 22-9-9, was shut in for 25,000,000 feet of gas from sand at 3,370-77 feet. S. J. McGee, Yarnel and others' No. 1 Riley, NW cor. SE Section 9-8-10, is dry and abandoned at 3,220 feet.

Kay County

Comar Oil Co.'s No. 1, NW cor. SW NE Section 5-28-1w, an old well, was deepened and completed for 100 bbls. from sand at 3,487-3,522 feet.

Muskogee County

Ernest Price has the machine out for No. 2 Woodall, CWL SW SW Section 20-15-16. J. Henigman and others have moved the machine out for No. 1 Francis, CSL NW SE Section 1-14-18. C. M. Bradley has the machine on the ground for No. 6 Crittenden, SE cor. NW NW SW Section 5-14-19. No. 1 Reed, NE cor SW SW Section 7-14-19, is rigging up. W. R. Sommerville's rig is on the ground for No. 1 Carver, NE cor. SE Section 4-13-19.

J. M. Gillette's No. 1 Barnett, CEL NS SE Section 19-16-15, has been plugged at 1,389 feet. Jolly-Ogg Oil Co.'s No. 1 Rector, SE cor. NE Section 18-15-17, is dry and abandoned at 2,180 feet. W. H. Trapp and others' No. 1 Scott, SW cor. SE SW Section 11-14-18, was abandoned without making hole.

Okfuskee County

F. A. Havel's No. 1-A Likowski, NE cor. SE SW Section 23-11-11, is drilling at 2,000 feet. Champlin Oil & Refining Co.'s No. 7 Jacobs, SW cor. SE SE Section 15-11-11, is rigging.

Okmulgee County

E. B. Grubbs and others have the rig on the ground for No. 1 Scott, NW cor. SW Section 12-15-14. Sheldon Oil Co. and others' No. 1 Skelton, C SW SE Section 15-13-12, an old well, is drilling deeper at 2,000 feet. J. E. Lambert's No. 2 McCombs, CWL SW NE Section 30-13-15, is drilling at 250 feet. Eagle Picher Lead Co.'s No. 1 Diamond, NE cor. NW SW Section 6-12-12, is drilling at 2,400 feet.

Lambert Oil & Gas Co.'s No. 3 Aultman, SW cor. SE NW Section 29-13-15, is dry and abandoned at 870 feet.

Osage County

Indian Territory Illuminating Oil Co.'s No. 372, NE cor. NW SE Section 22-27-11, is drilling at 140 feet. The machine has been moved in to deepen No. 300, SE cor. NE Section 2-25-11, old total depth being 1,702 feet. McCuen & Wormser's No. 7 NE cor. SE NW Section 15-24-8, is drilling at 150 feet. Indian Territory Illuminating Oil Co.'s No. 371, SW cor. SE SE Section 20-23-8, is spudding.

Winona Oil Co.'s No. 1, NE cor. Section 18-29-11, is making 8 bbls. from the Peru sand at 1,045-76 feet. The Texas Company's No. 1, SW cor. SE Section 27-27-6, is dry and abandoned in the Turkey Mountain sand at 3,400-30 feet. Zola Oil Co.'s No. 46, SW cor. SE NE SE Section 16-2s-12, was shot with 100 quarts and made 3 bbls. from the Tucker sand at 1,690-1,716 feet. Breene, Markham and others' No. 1, NE cor. SE Section 22-21-10, is a 15-bbl. well in the Prue sand at 1,562-80 feet. Devonian Oil Co.'s No. 1, NE cor. Section 33-21-10, was shot with 30 quarts and completed for 100 bbls. in the Prue sand at 1,483-1,500 feet.

Pawnee County

J. H. Turner and others' No. 1 Weeks, NE cor. SE Section 30-20-9, is a dry hole at 2,770 feet in the Wilcox.

Pontotoc County

Louisiana Oil Refining Co. has built the rig for No. 1 Perry, SE cor. NW Section 20-5-8. Henry and others moved a machine out for No. 1 Whitney, SE cor. NW SW Section 14-4-7. American Oil & Refining Co. has the rig up for No. 1 Stark, NE cor. SW SW Section 9-4-6.

Homaokla Oil Co.'s No. 1 Harjo, NE cor. SE SE Section 17-5-8, had sand at 2,438-2,456 feet and made 638 bbls. No. 1 Smith-Gilmer, SW cor. Section 16-5-8, is dry and abandoned at 2,558 feet. O. F. Smith's No. 1 Lloyd, NW cor. NE NW Section 28-3-4, is a dry hole at 1,004 feet.

Pontotoc County

Gypsy Oil Co.'s No. 2 Doebling, SE cor. NW Section 4-9-5, topped the Wilcox sand at 4,515 feet, drilled to 4,560 feet and was abandoned. Independent Oil & Gas Co. and Margay Oil Co.'s No. 4 Odell, NW cor. SW SE Section 4-9-5, Earlsboro Pool, had an initial production of 7,535 bbls. from the Wilcox sand at 4,256-95 feet. Barnsdall Oil Co.'s No. 6 Gibson, NE cor. NW NE Section 9-9-5, had the Wilcox sand at 4,352-63 feet and made 4,882 bbls. initial production. Mid-Continent Petroleum Co.'s No. 4 McKinley, NE cor. NW SW Section 9-9-5, had an initial production of 6,370 bbls. from the Wilcox sand at 4,389-96 feet. Phillips Petroleum Co.'s No. 7 Gram, SE cor. NW SE Section 9-9-5, made 1,661 bbls. from the Wilcox sand at 4,310-26 feet. Tidal Oil Co.'s No. 3 Watkins, NW cor. Section 9-9-5, had Wilcox sand at 4,290 feet to 4,306 feet and made 4,515 bbls. Sinclair Oil & Gas Co.'s No. 1 Foreman, SE cor. SW NE Section 18-9-5, was shot with 80 quarts and made 32 bbls. on the swab producing from the Wilcox sand at 4,157 feet. Magnolia Petroleum Co.'s No. 1 Cherry, SE cor. SW Section 13-7-4, Pearson area, was completed for 5,000,000 feet of gas in the Hunton lime at 3,640-50 feet. No. 1 Lewis, SE cor. NE SE Section 15-7-4, is a 265-bbl. well in the Hunton lime at 3,718-3,734 feet.

Seminole County

Magnolia Petroleum Co. made location for No. 8 Holmsley, NE cor. SE SE, Section 11-9-5, Earlsboro Pool. Empire Gas & Fuel Co. made location for No. 2 Barker, NW cor. SE NE, Section 12-9-5. Magnolia Petroleum Co. made location for No. 4 Dixon, NW cor. SE SW, Section 12-9-5. Location was made for No. 7 Seay, NW cor. SW SW, Section 12-9-5. Locations were also made for No. 8 Seay, NE cor. SW SW and No. 9 Seay, SE cor. NW SW, Section 12-9-5. Twin State Oil Co. has the rig on the ground for No. 6 Barker, SW cor. NE NE, Section 12-9-5. Pure Oil Co. made location for No. 6 Aldridge, NE cor. SW, Section 3-9-6, Seminole Pool. Roxana Petroleum Corp's. cellar has been dug for No. 4 Strothers, NW cor. SE, Section 3-9-6, Searight Pool. Larkin Oil Co. made location for No. 1 Cluck, NE cor. NW NW, Section 4-9-6. Superior Oil Co. made location for No. 1 Varnum, NE cor. SW NW, Section 4-9-6. Location was also made for No. 2 Varnum, SE cor. SW NW, Section 4-9-6. Barnsdall Oil Co. made the cellar for No. 1 Fife, NE cor. NW, Section 14-8-5. Gypsy Oil Co. made the cellar for No. 1 Doser, SE cor. NE, Section 7-8-6. Cellar has been dug for No. 1 Bradley, NE cor. SE SW, Section 9-8-6 Bowlegs Pool. Sinclair Oil & Gas Co. is putting up the rig for No. 6 C. Jones, SW cor. NE SE, Section 9-8-6. Magnolia Petroleum Co. made location for No. 2 Cordell, SE cor. NW, Section 11-8-6. Location was made for No. 1 M. Davis, NE cor. NW NE, Section 13-8-6. The Texas Co. made location for No. 15 Reed, NW cor. NE NE, Section 14-8-6. Magnolia Petroleum Co. has the rig on the ground for No. 1 Pattey, SW cor. SE NE, Section 35-8-6. Location has been made for No. 2 Pattey, NW cor. SE NE, Section 35-8-6. Indian Territory Illuminating Oil Co. has the rig on the ground for No. 4 Phoebe "B", NW cor. NE SW, Section 36-8-6. Philmack Oil Co. is moving in the rig for No. 1 Alex, NW cor. SW SE, Section 1-7-6 Little River Pool. Gypsy Oil Co. is building the rig for No. 1 Wadsworth, NW cor. SE, Section 1-7-6.

Barnsdall Oil Co's. No. 1 D. Cudjo, SW cor. NW SW, Section 3-9-5, Seminole Pool, is dry at 4,475 feet in the Wilcox sand. No. 3 M. Davis, SW cor. NE SW, Section 11-9-5, had the Wilcox sand from 4,266 feet to 4,271 feet total depth and made 2,611 bbls. Independent Oil & Gas Co. and others' No. 1 Gaines, SE cor. NE NE, Section 11-9-5, Earlsboro Pool, was completed for 3,440 bbls. in the Wilcox sand at 4,268-79½ feet. Magnolia Petroleum Co's. No. 3 Seay, NE cor. NW SW, Section 12-9-5, had an initial production of 2,020 bbls. from the Wilcox sand 4,275-91 feet. Gypsy Oil Co's. No. 1 Wisner, NW cor. NE, Section 13-9-5, is dry at 4,363 feet. Roxana Petroleum Corp's. No. 1 Anderson, NW cor. NE SW, Section 15-9-5, had the top of the Wilcox sand at 4,294 feet, drilled in to 4,328 feet and plugged back to 3,850 feet and made 4 bbls. on the swab. Kingwood Oil Co's. No. 5 Harjo, SE cor. NE SE, Section 22-9-6, Seminole Pool, has been abandoned at 4,860 feet. Independent Oil & Gas Co's. No. 1 P. Fixico, SW cor., Section 23-9-6, swabbed 200 bbls. after being deepened from 4,287 feet to 4,304 feet. Barnsdall Oil Co's. No. 3 L. Jones, SE cor. NE NE, Section 34-9-6, was completed in the Wilcox sand 4,110-4,262 feet for 7 bbls. T. B. Slick's No. 2 Born, NE cor. SW SE, Section 35-9-6, drilled to 4,630 feet in the Wilcox sand and was abandoned. No. 2 Giblet, SW cor. NE SE, Section 35-9-6, made 3,461 bbls. initial, from the Wilcox sand 4,142-85 feet. Jarvis & Holmes' No. 1 Amma, SE cor. NE NE, Section 11-9-7, is dry and abandoned at 4,585 feet. Magnolia Petroleum Co's. No. 1 Markwell, NE cor. NW NE, Section 28-9-7, is a dry hole in the Wilcox sand 4,384-4,405 feet. Indian Territory Illuminating Oil Co's. No. 1 Litka, NE cor., Section 9-7-6, has been abandoned at 4,537 feet.

The Texas Company's No. 2 Strothers, SW cor. NW NW, Section 2-8-6, Bowlegs Pool, was completed for 135 bbls. in the Wilcox sand 4,294-4,314 feet. Atlantic Oil Producing Co's. No. 1 C. Jones, SE cor. SW SE, Section 9-8-6, drilled the Wilcox sand 4,180-4,205 feet and made 3,100 bbls. Tidal Oil Co's. No. 4 Harjoche, SW cor. NW SW, Section 10-8-6, was completed for 480 bbls. from the Wilcox sand 3,997-4,006 feet. Barnsdall Oil Co's. No. 4 Murrow, SE cor. SW SW, Section 11-8-6, went into the Wilcox sand at 4,071 feet and drilled to 4,139 feet where it made 720 bbls. on the swab. Carter Oil Co.'s No. 7 Harjoche, SE cor. NW NW Section 14-8-6, is dry and abandoned at 4,290 feet. Empire Gas & Fuel's Co.'s No. 9 Lacey, C NW SW Section 14-8-6, has been abandoned at 2,632 feet. Pure Oil Co.'s No. 10 Reed, SE cor. NW Section 14-8-6, is a dry hole in the Wilcox sand at 4,373 feet. No. 14 Reed, SE cor. NE SW Section 14-8-6, made 10 bbls. on the pump from the Wilcox sand at 4,379-4 408 feet. No. 3 Strothers "D," NW cor. NE NW Section 14-8-6, was completed for 425 bbls. in the Wilcox sand at 4,143-56 feet.

The Texas Company's No. 6 Reed, SE cor. SW NE Section 14-8-6, had Wilcox sand at 4,281-4,305 feet and made 360 bbls. Indian Territory Illuminating Oil Co.'s No. 12 Livingston, NW cor. NE NW Section 15-8-6, made 165 bbls. from the Wilcox sand at 4,119-35 feet. Carter Oil Co.'s No. 2 McCiesy, SE cor. NE NE Section 21-8-6, is dry and abandoned at 4,315 feet. Indian Territory Illuminating Oil Co.'s No. 8 Bowlegs, NE cor. SE NE Section 22-8-6, swabbed 210 bbls. from the Wilcox sand at 4,561-68 feet.

Carter Oil Co.'s No. 7 Wise, SE cor. NW NE Section 23-8-6, was completed for 745 bbls. in the Wilcox sand at 4,281-4 320 feet. Empire Oil & Refining Co.'s No. 2 Wise, NE cor. SE NW Section 23-8-6, made 2,242 bbls. initial from the Wilcox sand at 4,339-75 feet. Mid-Continent Petroleum Corp.'s No. 2 Hutka, SW cor. NE NW Section 24-8-6, drilled to 4,360 feet in the Wilcox sand and was abandoned. No. 3 Hutka, NW cor. SE NW Section 24-8-6, a rig, has been abandoned. The Prairie Oil & Gas Co.'s No. 3 Whitney, SE cor. NW NW Section 23-8-6, produced 840 bbls. from the Wilcox sand at 4,360-78 feet.

Stephens County

Mudge Oil Co.'s No. 1 March, SE cor. SW SE Section 15-1s-5w, is drilling at 1,735 feet. Magnolia Petroleum Co.'s No. 1 J. Goza, SW cor. NE NW Section 1-2-5w, has been abandoned at 4,170 feet. Wirt Franklin's No. 5 A. Franklin, NW cor. SE NE Section 24-1s-4w, made 800 bbls. the first day from a series of sands at 2,774 feet to 3,071 feet.

Tulsa County

Savoy Oil Co. has a machine on the ground for No. 1 Agent, SW cor. NW NE Section 8-16-14.

Wagoner County

R. H. Perry has a machine at the location for No. 3 Cousins, SE cor. NW NE Section 7-17-16. J. H. Scriba's No. 4 Cane, SE cor. NW NW SW Section 30-17-18, is drilling at 565 feet. A Tillman and others' No. 3 Davis, SW cor. SE SW Section 11-16-16, is dry and abandoned at 812 feet.

Washington County

Grady & Hart's No. 1 Johnson, NW cor. NE NW NW Section 22-24-13, had the Burgess sand at 1,416-21 feet, drilled to 1,425 feet and is estimated making 1,000,000 feet of gas.

Famous Early Day Property Bought By Johnston & Matthews

BRADFORD, Pa., Aug. 22.—Johnston-Matthews Oil Co. of Bradford announce the purchase of a two-thirds interest in the John Bartley estate near Bingham and Riterville in Keating Township, McKean County, and comprising 1,725 acres of oil property with approximately 160 producing wells. Purchase was made from Mrs. Della Roche Bartley and John Bartley, jr., of Mount Alton. The purchase price was not made public.

This territory was one of the most productive in the early days of the Bradford Field. It was originally the property of John McKeown, famous pioneer producer, who left a fortune of $10,000,000 made in oil. In more recent years the lease was owned by C. P. Byron, R. J. Straight and others. The late John Bartley acquired this large tract from time to time, until he had altogether 1,725 acres. There are on the lease some 40 or 50 wells that have not been pumped since Mr. Bartley's death, which occurred several years ago.

Miss Hazel Bartley of Bradford, a daughter of the late Mr. Bartley, will retain her one-third interest.

James W. Matthews of the Johnston & Matthews Oil Co., will supervise and manage the entire property and will at once commence to get the wells in readiness to pump. There are several areas conducive to flooding.

JACK HENDERSON KILLED

NOCONA, Tex., Aug. 20.—Jack Henderson, 25, field superintendent for the E. L. Smith Oil Co. in the Nocona Field, was instantly killed when the automobile in which he was riding alone turned turtle on an oil field road.

WILDCAT OPERATIONS IN PANHANDLE

(Continued from Page 48)

FLOYD COUNTY

Explin. Co.'s No. 1 S. H. Boone, C. C. H. Johnson Sur... Spudded and S.D.
Explin. Co.'s No. 1 Land & Cattle Co. ... S.D., 246 ft. for casing.

GRAY COUNTY

Amogray Oil Co.'s No. 1 A. Chapman, SW NW SW, Sec. 9, Blk. 26, H. & G. N. Sur. ... Rig.
Atlantic O. P. Co.'s No. 1 Combs & Worley, NW cor. NE sec. 39, Blk. 3 ... T.D., 3,085 ft; shot 560 qts., 2,947-3,052 ft; sprayed 30 bbls. 24 hrs. and went dead; T.D., 3,165 ft; 6-in. set, 3,150 ft; drlg., 3,265 ft.
Archer, Blake et al's No. 1 Turneau, Sec. 111, Blk. 2-B.. Spudded and S.D.
Amos et al's No. 1 Crews, NW cor. Sec. 9, Blk. 25 ... Shot with 300 qts., 2,720-2,815 ft; T. D. 3,005 ft., bridged and spraying 5 bbls.
Bay Shore Oil Co.'s No. 1 C. W. Bradford, Sec. 143, Blk. 2-B ... Killed gas, fish. for bit, 2,668 ft.
British American Oil Co.'s No. 1 J. M. Patton, Sec. 61, Blk. B-2 ... Rigged and S.D; temp. abd.
Cole O. & G. Co.'s (was Magdalene Oil Co.'s) No. 1 J. E. Williams, Sec. 17, Blk. 1 ... S.D., 3,860 ft.
Danciger et al's No. 1 Jackson, NW cor. Sec. 88, Blk. B-2. Set 8-in at 2,477 ft.
Donley Gray Oil Co.'s No. 1 J. W. Gordon, Sec. 79, Blk. 3 ... S.D., 1,010 ft.
Jack Doyle's No. 1 D. W. Osborne, SE cor. Sec. 109, Blk. 3 ... Rig.
Edwards et al's No. 1 E. J. Case, NE cor. Sec. 182, Blk. B-2, H. & G. N. Sur. ... Cmt. 12-in. at 1,340 ft.
Empire G. & F. Co.'s No. 1 J. E. Cubine, NE cor. NW Sec. 36, Blk. 25 ... 6,000,000 ft. gas, 2,342-60 ft; top granite wash, 2,397 ft; set 8-in. pipe, 2,472 ft; drlg., 3,349 ft; 2 bailers water, 3,300-20 ft; 2½ bailers water per hr., 3,505 ft; P.B. to 2,740 ft; to shoot.
Empire G. & F. Co.'s No. 1 I. B. Hughey ... To drill deeper from 3,225 ft.
Empire G. & F. Co.'s No. 1 J. M. Saunders, SW cor. SE Section 40, Blk. 3 ... Shot, 240 qts., 3,050-3,113 ft; bridged and C.O.
Empire G. & F. Co.'s No. 1 J. F. Meers, NE cor. SE Sec. 107, Blk. 3 ... T.D., 3,160 ft; steel line meas. show fresh water; swabbed 50% water; swabbed down oil and water gone; drlg., 3,168 ft; 1,000 ft. oil in hole; shot 150 qts. 3,109-68 ft. making 37 bbls. daily; T.D., 3,172 ft.
Empire G. & F. Co.'s No. 1 Webb, SW cor. Sec. 59, Blk. 25; elev. 2,534 ft. ... Shot with 180 qts., 2,841-80 ft; show oil, shot with 150 qts., 2,452-85 ft.; no results; to complete as gas well; P.B. to 2,400 ft; 4,000,000 ft. gas.
Lefors Pet. Co.'s No. 1 Leach, Lefors Townsite ... Drlg., 725 ft.
Gladis Gray's No. 1 Colebank-Morse (was Foster et al's No. 1 G. Cutebank), SW cor. NE Sec. 65, Blk. 25 .. 2,905 ft., T.D; plugged back to 2,803 ft; shot 160 qts., 2,430-2,510 ft; 1,200 ft. oil in hole; bailed dry; shot 600 qts., 2,479-2,525 ft; C.O; swabbing 25 bbls. daily.
Gulf Prod. Co.'s No. 1 Bowers, Sec. 29, Blk. B-2 ... Drlg., 2,975 ft; 400 ft. oil in hole at 2,962-68 ft.
Gray County Pet. Co.'s No. 1 Herndon, Sec. 147, Blk. 3.. Hole full salt water, 3,420 ft; T. D., 3,535 ft.
Gray County Pet. Co.'s No. 1 A. Chapman, Sec. 70, Blk. 25. Running 6-in. to 2,846, 600 ft. oil in hole.
Neudigate et al's No. 1 A. Chapman, NE cor. E half SE Sec. 52, Blk. 25 ... Drlg., 2,665 ft; 500,000 ft. gas, 2,760-65 ft; rainbow of oil, 2,820-25 ft; salt water; S.D. granite wash, 2,827-28 ft, repairing rig.
Operators Oil Co.'s No. 1 Bowers, NE cor., Sec. 85, Blk. 3, I. & G. N. Sur. ... Drlg., 610 ft.
Midwest Explin. Co.'s No. 1 J. A. Hood, SE cor. SW, Sec. 33, Blk. 3, I. & G. N. Sur. ... Drlg., 750 ft.
Pampa Oil Co.'s No. 1 W. R. Campbell, Sec. 90, Blk. 3.. Set 6-in., 2,460 ft.
Pampa Pet. Co.'s No. 1 Mary Leopold, Sec. 141, Blk. 3.. Water, 3,230-60 ft; slight oil show in granite wash, 3,572-75 ft; S. D., 3,700 ft.
Petroleum Explin. Co.'s No. 1 L. C. McConnell, SE cor. NW Sec. 174, Blk. 3 ... Flowed 210 bbls. from lime at 3,245-55 ft; T.D., 3,282 ft; will shoot.
Purple Sage Oil Co.'s No. 1 Johnson, Sec. 8, Rockwell County school land ... First oil show, 2,645 ft; water, 2,660 ft; show oil in gran. wash, 2,790-95 ft; 8-in. cas. set., 2,803 ft; show gas, 2,814 ft; S.D., 3,208 ft.
Riley & Heck's No. 1 Mrs. Hopkins, Sec. 66, Blk. 2-B .. 3,110 T. D., flow and swabbed 20 bbls. for week from granite wash, 3,000 to 3,110 ft.
Rensoul Pet. Co.'s (was Salisbury & Reynolds') No. 1 M. Huselby, C 3E NE NE Sec. 55, Blk. 25, H. & G. N. Sur. ... Flow, 40 bbls. daily from granite wash topped, 2,407 ft; drlg. granite wash, 2,845-53 ft with small increase; shot with 400 qts., 2,695-2,780 ft. and to be shot again.
Sullivan et al's No. 1 fee, NW cor. E half SW, Sec. 1, Blk. 1, A. C. H. & B. Sur. ... Drlg., 1,410 ft.
J. Williams et al's No. 1 C. W. Bradford, Sec. 123, Blk. B-2 ... Rig temp. abd.

HALE COUNTY

Donnell Pet. Co.'s No. 2 Mullican, NW cor. Sec. 66, Blk. A-3, I. & S. B. Sur. ... Drlg., 345 ft.
Donnell Pet. Co.'s No. 1 Mulligan, C Sec. 21, Blk. B, R. M. Thompson Sur. ... 200 ft. fluid in hole from 407-14 ft; run. tubing.
Exploration Co.'s No. 1 Crawford, Cen. NE, Sec. 17, Blk. C-3, T. T. R. R. Sur. ... Spud and S.D.
Explin. Co.'s No. 1 fee, C SE half Sec. 19, Blk. S-4, D. & S. E. Sur. ... Rig; T.A.
Explin. Co.'s No. 1 Goodman ... Spudded and S.D.
A. S. Mimm's No. 1 W. A. Ritcher, 700 ft. from east line and 1,200 ft. from south line, Sec. 17, Blk. X, John Glynn Sur. ... S.D., 350 ft. for 10-in. casing.

HALL COUNTY

Seifert et al's No. 1 Owens, C NE Sec. 179, Blk. S-5, Dennison & Pacific Sur. ... Spudded and S.D.

HANSFORD COUNTY

Oklavania et al's No. 1 Coots, Sec. 13, Blk. 45, H. & T. C. Sur. ... S.D., 350 ft.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood ... Spudding.

HARTLEY COUNTY

Deep Rock Oil Co.'s No. 1 Lymann & Balfour, Sec. 9, Blk. 2 ... Show gas and rainbow of oil, 2,560 ft; top lime, 2,810 ft; 24,000,000 ft. gas, 3,100-3,280 ft; show oil, 3,648-50 ft; 3,653-75 ft. 150 ft. salt water; set 6-in. 3,642 ft., C.O., 3,665 ft.
Eslick et al's No. 1 J. B. Irving, Sec. 13, Blk. 13 .... Topped granite wash, 3,108 ft; show oil, 3,226 ft; drlg., 3,585 ft.
J. E. McKanna's No. 1 Frances Farwell, Sec. 30, Blk. 22.. Run. 6-in. casing to 2,990 ft; drlg. lime, 3,200 ft.
J. E. McKanna's No. 1 J. M. Shelton est., Sec. 29, Blk. 202 ... S.D., 3,595 ft; cas. trouble; rig blown down; rebuilding rig.

HEMPHILL COUNTY

Hoover et al's No. 1 Schaller est., Sec. 4 ... Spudded and S.D.
Hoover et al's No. 1 fee, J. S. Hood Sur. ... Run. 6-in. cas. to 4,555 ft; S.D., 4,598 ft.

HUTCHINSON COUNTY

Amarillo Oil Co.'s No. 1 Ida Ingerton ... 70,000,000 ft. gas, 2,400-2,610 ft run., 8-in. to 2,665 ft; fish, 2,725 ft.
Anderson & Pritchard's No. 2 William Yake, SW cor. NW, Sec. 1, Blk. J, H. & G. N. Sur. half mile W of No. 1 ... Drlg., 1,750 ft.
R. G. Barnum et al's No. 1 Garland Sanford, Sec. 78, Blk. 46 ... Rig.
Beam et al's No. 1 Cockrell, Sec. 3, Blk. 23 ... S.D., 405 ft. for orders.
Berryman Oil Co.'s No. 1 Sanford, Sec. 83, Blk. 46, H. & T. C. Sur. ... 80,000,000 ft. gas, 2,690-2,905 ft; show oil, 2,915 ft; show oil 3,030-39 ft; S.D., 3,040 ft.
Big Coach Oil Co.'s No. 1 Dunnaway, Sec. 5, Blk. Y ... S.D., 750 ft.
Conklin et al's No. 1 Johnson, Sec. 1, Blk. X03, H. & O. B Sur. ... S.D., 600 ft. for 12-in.
Great Plains Oil Co.'s No. 1 Bivins, Sec. 13, Blk. Y2, T. T. R. R. Sur. ... 60,000,000 ft. gas, 2,540-60 ft; S.D., 3,017 ft.
Great Plains Oil Co.'s No. 1 Kingsland, Sec. 4, Blk. Y.. S.D., 2,345 ft.
Golden Eagle Oil Corp.'s No. 1 J. Q. Bost, Sec. 6, Blk. Y-2 ... Derrick.
McMan O. & G. Co.'s No. 1 Albert Yake ... Drlg., 1,600 ft.
Panfield Oil Co.'s No. 1 Luginbyhl Bros., Sec. 50, Blk. M-22 ... S.D., 1,200 ft.
Mtn. State Oil Co.'s No. 1 W. B. Haile, Sec. 24, Blk. M-21 S.D., 3,039 ft.
Phillips Pet. Co.'s No. 13 Elva-Whittenburg, E. Tomlinson Sur. ... Drlg., 4,259 ft.
Prairie O. & G. Co.'s No. 1 J. M. Sanford, SW cor. N half Sec. 85, Blk. 46 ... 1,000 ft. oil in hole, 2,997-3,009 ft.
Prairie O. & G. Co. and Vacuum Oil Co.'s No. 1 Cal Merchant ... Drowning out 75,000,000 ft. gas, 2,252-2,740 ft; drlg. by tools, 2,550 ft.
Roxana Pet. Corp.'s No. 1 E. Cockrell ... Top lime, 2,860 ft; flow, 600 bbls.
Skyrocket Oil Co.'s No. 1 Mrs. R. A. Jameson ... Drlg. out plug, 2,519 ft.
Sweeney et al's No. 1 Johnson, Sec. 38, Blk. Y ... S.D., 1,780 ft.
The Texas Company's No. 1 Ellis Cockrell, Sec. 1, Blk. Y ... U.R., 8-in., 3,215 ft.
Vitek Oil Co.'s No. 1 W. F. Allen, Jose Rodriguez Sur. .. S.D., 180 ft.

KING COUNTY

California Co.'s No. 1 Spikes Farm No. 2 ... Show of gas 1,980-90 ft; 6 bailers salt water per hr., 2,085-90 ft; drlg., 2,560 ft.
Gibson & Johnson's No. 1 Burnett est. ... Salt water, 2,525-50 ft; run. 8-in to 2,576 ft; run., 6-in. to 3,067 ft; drlg., 3,179 ft.
Humble O. & R. Co.'s No. 1 Pitchfork, Sec. 171, Blk. A-96, John H. Gibson Sur. ... Spudding.
Midwest's No. 1 Patton ... U.R., 8-in., 2,940 ft.
J. L. Pattison's No. 1 Patton ... S.D., 2,235 ft; slight show gas, 2,115-30 ft.
Sinclair ... H.F.W., 3,265 ft.
White Eagle's No. 1 ... Drlg., 2,980 ft.

LIPSCOMB COUNTY

Cal-Tex's No. 1 Bradford, C NE NE Sec. 899, Blk. 43, H. & T. C. Sur. ... Spudded and S.D.
Camp Creek Oil Co.'s No. 1 Mrs. H. D. May, Sec. 612, Blk. 45 ... S.D., 600 ft.
McCorkle's No. 1 A. Barton, NE cor. SW SE, Sec. 504, Blk. 43, H. & T. C. Sur. ... Water in lime at 4,126-40 ft; 6-in. set, 4,155 ft; S.D., 4,200 ft.
Ozark Drlg. Co.'s No. 1 Frass, NE SE Sec. 106, Blk. 10, H. & T. C. Sur. ... Rig on ground.
Smith, Kinsley & Ruby's No. 1 C. W. Jones, NE cor. SW, Sec. 100, Blk. 43 ... S.D., 3,800 ft.

MOORE COUNTY

Amarillo Oil Co.'s No. 2 Terry Thompson, Sec. 19, Blk. 44. Making 84,000,000 ft. gas; lime, 3,425 ft; gas killed; T.D., 3,556 ft; shut in
Moore County Oil Co.'s No. 1 Sneed, Sec. 30, Blk. 6-T .. 8,000,000 ft. gas, 2,700-12 ft; drlg., to 2,771 ft, gas increased to 15,000,000 ft; 8-in. pipe set at 2,965 ft; ½ bailer water per hr. from 3,242-60 ft; S.D., 3,351 ft.
Shadler Bros.' No. 1 John Lowery, Sec. 237, Blk. 44 .... Drlg. up csg. shoe, 2,630 ft.
Skelly Oil Co.'s No. 1 Armstrong & Byrd ... Show oil, 3,150 ft; lime pay, 3,179 to 3,213 ft; flowed 118 bbls.
Prairie and Shamrock's No. 2 Gober, Sec. 16, Blk. M-21.. Fish., 512 ft.

MOTLEY COUNTY

Exploration Co.'s No. 1 Burleson ... Spudded and S.D.
Exploration Co.'s No. 1 Tillson ... S.D., 750 ft. for repairs.
Exploration Co.'s No. 1 Matador Land & Cattle Co. Cen. SW; Sec. 37, John Gibson Sur. ... Spudded and S.D.
Wheeler et al's No. 1 C. D. Bird, C NE Sec. 4, Blk. S, Stephens Sur. ... Spudded and S.D.

OCHILTREE COUNTY

W. G. Burton's No. 1 Stickler, Sec. 579, Blk. 43 ... Drlg., 3,950 ft.
Hamilton et al's No. 1 R. E. Wamble, Sec. 144, Blk. 43 .. S.D., 350 ft.
McCorkle Pipe Line Co.'s No. 1 R. H. Moore, Sec. 471, Blk. 43 ... S.D., 1,600 ft.
McCorkle's No. 1 Weinett, Sec. 674, Blk. 43 ... Fish. for bit, 560 ft.
Standard Dev. Co.'s No. 1 Bowden, Sec. 923, Blk. 43 .... S.D., 900 ft.

OLDHAM COUNTY

Prairie O. & G. Co.'s No. 1 Landergin, SE cor. NE SW Sec. 46, League 310, Capital land ... Hole full water, 4,085-93 ft; drlg. 4,270 ft.

PARMER COUNTY

Humble O. & G. Co.'s No. 1 Farwell; elev. 4,005 ft. .. Temp. abd., 3,600 ft.

POTTER COUNTY

Amarillo Oil Co.'s No. 1 Masterson, Sec. 69, Blk. O-18, D. & P. Sur. ... Drlg., 1,750 ft.
Amarillo Oil Co.s No. 1-B Masterson, Sec. 43, Blk. G-M-3, G. & M. Sur. ... Drlg., 390 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Mrs. H. Ledrick & Sons, Sec. 7, Blk. 5-A ... Show gas, 4,990 ft; show oil, 4,992 ft; cas. set at 4,992 ft; drlg., 5,070 ft.
Dunbar's No. 1 H. A. Gill, Sec. 127, Blk. M-2 ... Cellar; temporarily abd.
Murphy et al's No. 1 Gill, Sec. 31, Blk. M-2 ... S.D., 650 ft.
Roco Oil Co., formerly Charles Page et al's No. 1 W. T. Hammond, Clay County school lands ... Spud. and S.D.
C. C. Wilson, No. 1 A. H. Tandy, NE cor. Sec. 182, Blk. 42, H. & T. C. Sur. ... Spudded and S.D.

SHERMAN COUNTY

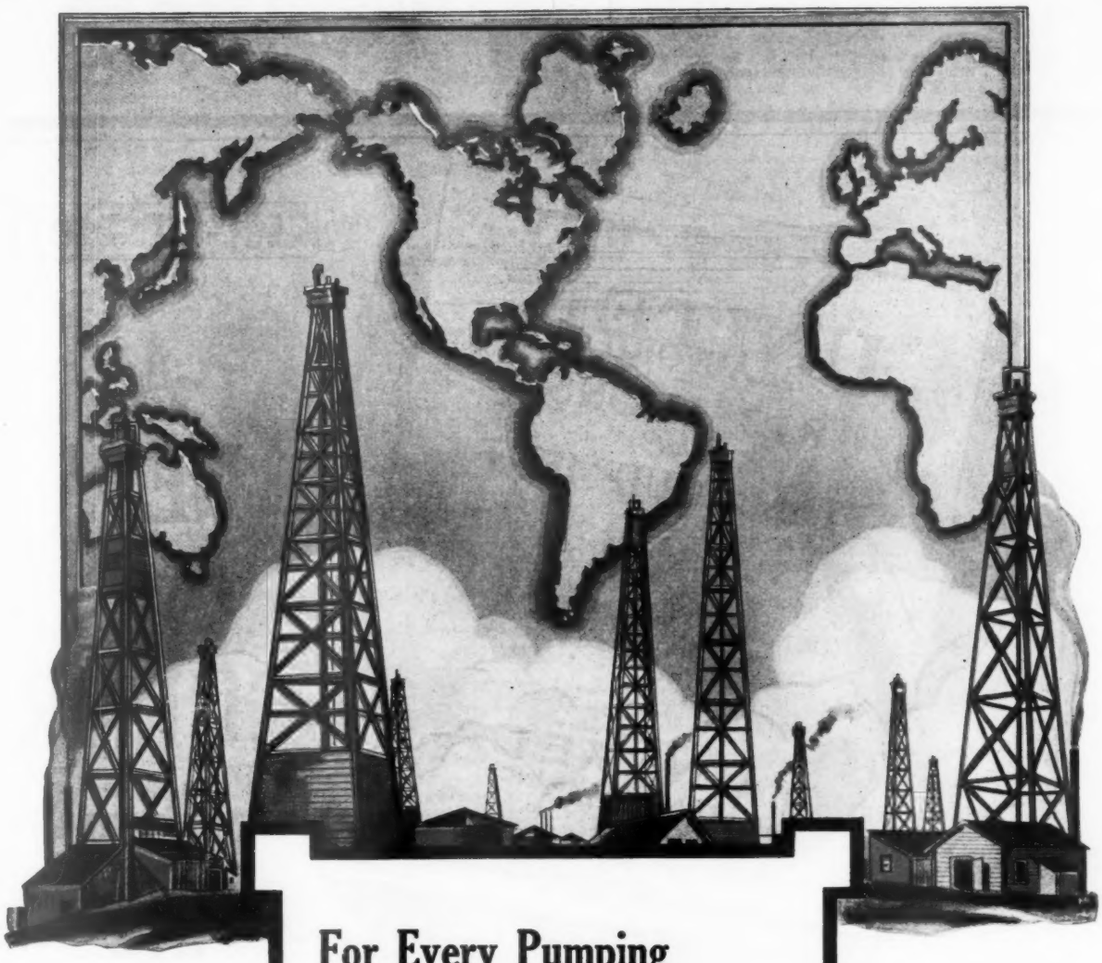
Gibson Oil Co.'s No. 1 Bivins, Sec. 35, Blk. 3-B ... Drlg., 1,827 ft.
Hagy & Harrington's No. 1 S. F. Flores, C SW Sec. 64, Blk. 3-T, T. & N. O. Sur. ... Cmt. 10-in. at 1,650 ft.
Phillips Pet. Co.'s No. 1 Price & Fuqua, C NE, Sec. 33, Blk. 2-B, G. H. & H. Sur. ... Drlg., 1,660 ft.
Whitehead et al's No. 1 Lee Bivins, C SW Sec. 36, Blk. 2, G. H. & H. Sur. ... Location abdn.

SWISHER COUNTY

Explin. Co.'s No. 1 W. C. Denwiddie, Sec. 70, Blk. M-11, A. B. & M. Sur.; elev. 3,610 ft. ... Rig on ground.
R. H. Miller's No. 1 Todd ... Loc. temporarily abd.

WHEELER COUNTY

Angus et al's No. 1 Vermillion, SW cor. NW SW, Sec. 80, Blk. 17, H. & G. N. Sur. ... T.D., 2,139; S.D. in granite; 10,000,000 ft. gas, 2,040-45 ft.
Boyles & Johnson's No. 1 S. L. Lewis, Sec. 40, Blk. 24.. Standardizing, 2,050 ft.
Foster et al's No. 1 S. H. McDonald, SE cor. NW SW, J. N. Lindsay Sur. ... Spudded and S.D.
Lyons et al's No. 1 Jackson, Sec. 11, Blk. 27, H. & G. N. Sur. ... Drlg., 1,510 ft.
Mariand Oil Co.'s No. 2 W. E. Bentley ... Show gas, 2,205 ft; S.D., by agreement.
Piney Oil & Gas Co.'s No. 1 W. S. Walker, Sec. 44, Blk. 24, H. & G. N. Sur. ... Drlg., 1,100 ft.
J. J. Rook's No. 1 M. Mertel, SE NE Sec. 4, Blk. 24, H. & G. N. Sur. ... Fish. casing, 1,300 ft.
Wheeler O. & G. Co.'s No. 1 P. J. Sorenson, Sec. 53, Blk A-4 ... T.A.
Smith Brady et al's No. 1 P. J. Sorenson, Sec. 53, Blk. 4-A ... S.D., 2,112 ft. for orders, preparing to resume drilling.
E. L. Woodley, Jr.'s No. 1 Woodley, Sr., Sec. 13, Blk. 5-A. Show oil, 2,227 ft; fish., 2,332 ft.
The Texas Company's No. 1 Bell, Section 71, Blk. 13, H. & G. N. Sur. ... Gas, 2,005 ft; swabbed 40 bbls in 8 hrs. from granite wash, 2,145-55 ft; S.D., 2,301 ft.



For Every Pumping Condition———

The Hough line of Balls and Seats is made to fit every pumping condition.

1st. —There is Steelex for use in wells where sand is present.

2nd.—There is Bronzex for use in wells where lodestone or alkali is present.

3rd.—There is Repelex for use in wells where acid or other strong elements is present.

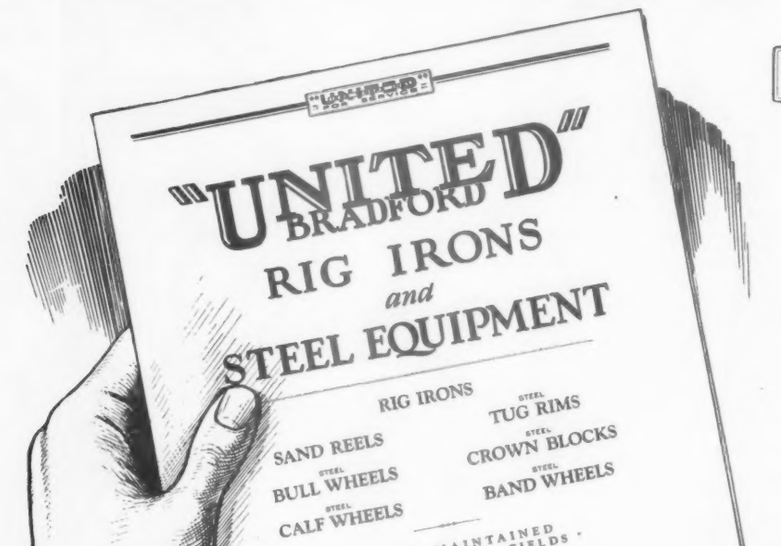
Made of the best materials, accurately fitted, neatly packaged and awaiting your call at your favorite dealers.

THE CHARLES N. HOUGH MFG. CO., Franklin, Penna.

W. Tarkington, Sales Representative
1724 Ruth Street, Houston, Texas

C. O. Shumaker, Sales Representative,
1143 South Xanthus St., Tulsa, Okla.

Products That Cut Down Your Underground Overhead



"UNITED" IRON WORKS INC. FOR SERVICE

A NEW CIR-CULAR SHOW-ING

UNITED BRADFORD RIG IRONS AND STEEL EQUIPMENT

WRITE FOR YOUR COPY TODAY

DISTRIBUTED IN ALL PRINCIPAL FIELDS IN KANSAS, OKLAHOMA, ARKANSAS AND TEXAS

Manufacturers of RIG IRONS and STEEL EQUIPMENT STEEL TANKS DRILLING MACHINES SWAB BARRELS

UNITED
IRON WORKS, Inc.
TULSA, OKLA.

General Office
Kansas City, Mo.

Sales Offices
737 Amarillo Bldg.
Amarillo, Tex.

Magnolia Bldg.
Dallas

ROXANA PETROLEUM PLACES ORDER FOR 296 MILES OF LINE PIPE

By B. E. V. Luty

PITTSBURGH, Pa., Aug. 22.—Neither the demand for steel in general nor the demand for oil country tubular goods in particular is any lighter this month than last, but the appraisal of affairs in steel is less favorable because the trade is habituated to expecting a distinct improvement, of seasonal character, by this time. For three years past August has shown considerably heavier steel production than July—10 per cent more both last year and the year before—which means that demand must have begun increasing before August 1. So far, this month there has been no increase in demand.

There is a question indeed whether the operating of the steel industry will average as high this month as last. With the same rate of steel production this month as last the total production in the two months would be 14 per cent under that in the same months of 1926, whereas the first six months of the year showed only 1½ per cent loss from the first half of last year.

Thus it appears that steel demand is on a definitely lower level and trade is made to appear the duller because it takes a little increase from year to year to keep the industry similiarly engaged, because capacity increases slightly, partly from a little new construction here and there and more largely because with continued activity mills get to performing better.

The decrease in demand this year from last is attributable in part to general business being less active, and in part to the big hole the light demand for oil country tubular goods has made, that line having been unusually active last year while this year it is unusually light.

Unfilled Tonnage

The steel corporation's unfilled tonnage statement for July was not favorable. While it showed an increase of 88,768 tons in the total of unfilled obligations, when June had shown practically an even break, with the nominal increase of 2,305 tons, the July increase occurred through there being a larger decrease in shipments, so that bookings decreased from June to July. Shipments were at about 77 per cent of capacity in June and 67 per cent in July.

The steel industry is now operating at slightly under 70 per cent of full capacity, or at about the rate shown for July. Operations are maintained by current business, in new orders and in specifications against contracts. Mill schedules are made up from day to day and at a given plant there are continued variations as there is no backlog to maintain a steady gait.

Line Pipe Orders

The only line pipe business placed recently was the order of the Roxana Petroleum Co., St. Louis, which went to a Youngstown pipe mill; 220 miles of 10-inch and 76 miles of 6-inch, both plain end, amounting to about 25,000 tons. The long talked-of Amarillo-Denver natural gas line is still in abeyance. It seems the projectors still have to obtain distribution franchises from the city councils of Denver, Colorado Springs and Pueblo. The latest estimate is that the line will involve 360 miles of 22-inch pipe and perhaps as much as 175 miles of 20-inch for feeder laterals, in all amounting to about 100,000 tons.

The automobile industry still fails to have a definite picking up in activity, as has been predicted for weeks past, and if this does not come soon the time of year will have been passed, as the recent rate is more than could be expected for late in the year, when the trade is always slack. Not enough tonnage of steel has thus far been bought for the new Ford model to count for anything.

Finished steel prices are quite steady all along the line, mills realizing the necessity of being punctilious to observe prices since declines once started would have no stopping point.

In the valley pig iron market basic is off 25 cents to $17.25 and foundry 50 cents to $17.50, Bessemer remaining at $18.50.

MICHIGAN FIELDS

(Continued from Page 63)

of the river, have another well that is nearing the spot to find the Berea.

Sutton Sales Co.'s well, on its property at Water Street and Genesee Avenue, is expected to reach the Berea during next week. This well is on the east side of the river.

Another well due to reach sand within a few days is that of Weidemann & Lemunyon, or the Dundee Oil & Gas Co., on the Cuthbertson property on the east side of the Bay Road about half a mile north of the Shattuck Road, in the western part of the field.

Ohio Fuel Corp. is drilling No. 5 on the Fisher farm, north of the Shattuck Road and east of the Bay Road.

Saginaw Prospecting Co. is running seven strings of drilling tools on its Saginaw holdings at this time, and has the largest number of producing wells in the field, something like 61 completions, all told.

The Sun Oil Co. is close to the sand at No. 6 on the John Stelzreide farm, Section 11, Saginaw Township, and is drilling No. 4 on the Louis Voight farm, in the southeast quarter of Section 10, as well as No. 2 on the Pere Marquette right of way.

Other Developments

The Sun Oil Co. has started work at its test near the town of Morse, south of Owosso, on the Gallagher-Scully lands, in Antrim Township, Shiawassee County, and about 13 miles southeast of its Owosso well. This company is delayed with its well on the Edwin Robbinnolt property in Elba Township, Gratiot County, by broken machinery. The well failed to make any showing in the Berea sand, and is reported to have reached what looks like the Saginaw sand when the mishap took place.

Some Wildcats

Reports from Huron County at a point running north and between Saginaw Bay and Lake Huron are that a number of shallow tests will be drilled by the Pure Oil Co. in conjunction with the Sebewaing Prospecting Co. of Sebewaing, which has a large acreage under lease. The test work is to be done on the west side of the county on the Saginaw Bay side. Three locations have been made. One location is on the Henry Hafner farm, 4 miles north of the town of Sebewaing, another on the John Engelham farm, near Kilmanagh, northeast of Sebewaing, and the third location on the Henry Kleinfeld farm, a couple of miles east of the town of Pigeon, to the northeast of Kilmanagh and almost directly west of Bad Axe. These will be shallow tests and, if not producers, some deep test work will be done. This neck of land projecting out between the two bodies of water has been carefully looked over by a number of oil men from the Lima Field and they report indications favorable for oil.

DRAKE DAY, AUGUST 27

There will be no formal celebration of Drake Day this year, but oil men in all places are asked by George H. Torrey, chairman of the Drake Day Association, to pay special heed to the day and observe it in an appropriate way. Mr. Torrey suggests that the various oil associations call attention to the date in their bulletins, that luncheon clubs scheduled to meet then in the various oil centers should devote the session to a Drake meeting and that the oil men of the country on that date give some thought to Drake Day and its meaning. Drake Day is August 27, and commemorates the completion of the Drake well, the first ever drilled for oil which actually produced, near Titusville, Pa., on August 27, 1859.

OKLAHOMA CRUDE OIL AND ROYALTY REPORTS FOR SECOND QUARTER 1927

Reports of companies and individuals having oil or gas production in Oklahoma during the second quarter of this year, filed with the state auditor for taxation purposes under the gross production tax law, have been compiled from the state records as below. The report, as given below, includes only companies and individuals having a crude oil production with a value of $5,000 or more for the three months—April, May and June—or a royalty interest with production valued at $2,000 or more for the quarter. Royalty interests are indicated by an asterisk.

A

Name and address—	Oil barrels	Gas M. feet	Cash received
*E. C. Aldridge, Wewoka	.....	.....	$12,245.17
Atlantic Oil Producing Co., Dallas, Tex.	.....	488	43,612.80
*Atlantic Oil Producing Co., Dallas, Tex.	15,693.07	3,421	21,507.30
Atlantic Oil Producing Co., Dallas, Tex.	490,031.42	.....	652,996.52
Air Oil Co., Tulsa	4,410.73	.....	6,583.97
Alma Petroleum Co., Oklahoma City	2,765.92	100	11,549.53
Alvarado Oil Co., Tulsa	5,522.74	.....	6,372.71
Atchison Oil & Gas Co., Atchison, Kans.	1,717.89	.....	2,137.19
American Oil Development Co., Pittsburgh, Pa.	7,415.64	.....	9,287.91
*J. W. Adair and Nora Quincy	.....	.....	4,139.71
*Adams Royalty Co., Chicago	.....	.....	168,555.51
*Walter Andrews, Ada	.....	.....	62,153.29
Arthur Oil Co., Sistersville, W. Va.	.....	.....	9,811.40
*Arthur Oil Co., Sistersville, W. Va.	.....	.....	233.54
*American National Bank, Oklahoma City	3,681.13	.....	6,390.70
N. L. Amster, Ardmore	9,552.54	.....	16,558.40
*F. M. Aiken, Tulsa	.....	.....	10,565.20
*H. Y. Arnold, trustee, Tulsa	1,464.34	.....	2,472.69
*August-Rust and Oppenheim, New York City	.....	.....	47,566.31
Anthony, S. W., Mounds	.....	.....	7,956.27
*Amerada Petroleum Co., Tulsa (suspense account)	.....	.....	6,144.85
Amerada Refining Corp., Tulsa	.....	.....	104,608.01
Amerada Petroleum Corp., Tulsa	2,711,934.30	1,441	3,731,165.29
*Amerada Petroleum Corp., Tulsa	.....	.....	862.19
*American Royalty Petroleum Co., Tulsa	3,069.89	.....	5,171.26
*Forest Anderson, Earlsboro	.....	.....	30,443.78
*Anderson & Peterson, Inc., Blackwell	.....	.....	3,314.91
*Anderson & Peterson, Inc., Blackwell	.....	.....	3,895.29
*C. F. Adams, Ardmore	.....	.....	3,405.35
*Atkins lease royalty interest	8,639.48	.....	14,555.22
*Alma Royalties Co., New York City	.....	.....	12,826.31
*Atlas Royalties Co., Tulsa	6,877.26	.....	8,927.06
*Atlas Royalties Co., Tulsa	.....	.....	2,271.47
*H. N. & Ethel Andrews, Newkirk	.....	.....	4,992.17
*Agirine Oil & Gas Co., Tulsa	.....	.....	5,670.17
Argo Oil Co., Denver, Colo.	.....	.....	89,382.48
*James M. Anthis, Muskogee	.....	.....	3,056.09
Adams & Prince, Amarillo	9,246.23	.....	9,636.57
American Eagle Oil Co., Bartlesville	13,660.18	.....	18,178.17
Arkansas Fuel Oil Co., Pittsburgh, Pa.	11,899.63	.....	12,109.27
Anolu Petroleum Corp., Blackwell	.....	.....	10,810.55
*B. M. & R. B. Athey, Enid	.....	.....	2,088.90
*Atlantic Oil Producing Co., Philadelphia, Pa. (suspense)	.....	.....	6,197.76
B. N. Alton, Tonkawa	7,019.04	.....	10,036.86
American Oil & Refining Co., Oklahoma City	.....	.....	116,088.03
*American National Co., Oklahoma City	.....	.....	2,825.51

B

*Nettie E. Beatty, Los Angeles, Calif.	.....	.....	2,087.76
A. C. Brown Oil Enterprise, St. Louis, Mo.	7,988.77	.....	9,846.23
Bissett, Lytle & Gray, Tulsa	5,487.06	.....	6,803.95
Braman Oil Co., Inc., Tulsa	10,410.78	.....	13,555.93
F. R. Billingslea, Tulsa	.....	.....	22,913.57
*F. R. Billingslea, Tulsa	.....	.....	1,002.85
*John L. Brock, Jr., Okmulgee	.....	.....	6,672.73
*William Buck, Wetumka	.....	.....	3,847.27
*John H. Bennett, Pauls Valley	.....	.....	3,487.69
*J. M. Bumpas, Duncan	5,749.98	.....	6,385.19
*Roy Buckner, Wewoka	.....	.....	3,456.15
Bellis & Good, Cushing	.....	.....	4,351.70
*F. M. Byrd, Enid	.....	.....	5,055.93
*Ben Blubaugh, Tonkawa	.....	.....	5,630.10
Gladys Belle Oil Co., Tulsa	18,148.95	178,942	35,123.59
Bauer-Strawn Co., Tulsa	.....	.....	12,402.93
Burke-Hoffield Oil Co., Tulsa	.....	.....	10,699.32
*Burke-Greis Oil Co., Tulsa	.....	.....	4,257.87
Burke-Greis Oil Co., Tulsa	.....	.....	142,771.48
Berry Petroleum Co., Tulsa	18,229.65	2,682	23,589.65
Frank M. Breene trust estate, Tulsa	7,912.38	.....	9,859.31
Frank M. Breene, Tulsa	4,524.76	.....	5,979.48
Blackwell Oil & Gas Co., Blackwell	.....	.....	261,637.80
*Blackwell Oil & Gas Co., Blackwell	.....	.....	732.20
Barnsdall Oil Co., Tulsa	1,349,816.23	.....	1,780,835.03
*Barnsdall Oil Co., Tulsa	1,494.26	.....	2,024.23
Barnsdall Oil Co., Tulsa	.....	1,044,608	52,685.81
*J. Q. & Lilas S. Blue, Winfield, Kans.	3,644.02	.....	5,026.38
*Augusta Buchholz, Perry	.....	.....	4,008.41
*H. A. Barn, Seminole	.....	.....	15,554.53
*W. L. Brittain, Oklahoma City	.....	.....	2,250.00
*Willia Brittain, Oklahoma City	.....	.....	2,250.00
*E. J. Blaas, Cushing	.....	.....	14,469.09
*H. D. Brame, Los Angeles, Calif.	.....	.....	4,509.91
*Blue Ribbon Oil & Dev. Co., Shawnee	.....	.....	47,510.56
*Becker, Anna, Tonkawa	.....	.....	1,893.01
*J. J. Brown, Jr., et al, Wichita, Kans.	.....	.....	5,280.69
Baltic Operating Co., Bartlesville	4,949.27	.....	5,295.68
*Mrs. Mary F. Barrett, Austin, Tex.	2,197.34	.....	2,811.41
*J. W. Brame, Los Angeles, Calif.	.....	.....	4,609.91
*Ben and Emma Boepple, Covington	.....	.....	4,064.82
*William C. Bird, New York City	.....	.....	2,690.19
*Mary J. Belless, Guthrie	.....	.....	2,196.71
*Mrs. Jennie L. Barnum, Kaw City	.....	.....	3,187.52
*Herbert Barnum, Kaw City	.....	.....	2,673.91
*B. J. Badger, Okmulgee	.....	.....	3,819.00
*W. O. Broyles, Stillwater	.....	.....	4,197.00
*Buchner Co., Holdenville	.....	.....	2,481.99
*H. A. Born, Seminole	.....	.....	14,578.51
*S. J. Brown, Duncan	.....	.....	4,132.10
*H. E. Bryant et al, Earlsboro	28,452.84	.....	36,536.18
C. E. Burlingame, Bartlesville	.....	.....	15,370.57
*Mary Blasdel, Blackwell	.....	.....	4,795.31
*W. A. Brooks and J. E. Carsar, trustee for Miller Brothers Ranch, Marland	.....	.....	28,731.21
*C. W. Barnes, by D. Fink, trustee	.....	.....	2,358.01
James Brann, Bartlesville	6,356.61	.....	8,198.76
*James Brann, Bartlesvile	.....	.....	271.48
*Mrs. R. E. Burks, Braman	.....	.....	4,499.42
*G. A. Biddle, Braman	.....	.....	4,499.42
*F. A. Beverlin, Tonkawa	.....	.....	11,423.02
Britton-Johnson Oil Co., Tulsa	7,045.45	.....	8,045.53
Barbara Oil Co., Oklahoma City	7,537.98	.....	11,681.72
Boggs Oil Corp., Oklahoma City	.....	.....	42,275.00
J. T. Beard and E. I. Kolb, Duncan	12,721.54	.....	17,548.30
Beard & Crump, Duncan	12,088.07	.....	15,132.77
Beard & Kolb, Duncan	.....	.....	736.03
*G. M. Berry, Pawnee	.....	.....	13,101.35
*C. C. Bombarger, Paden	.....	.....	3,520.54
Beacon Oil Co., Bartlesville	8,512.10	.....	10,176.02
*Lulu Bowlegs, Seminole	.....	.....	3,286.64
*William C. Breed, New York City	3,727.84	.....	6,633.97
George S. Bole, Tulsa	16,405.68	.....	22,190.95
*George S. Bole, Tulsa	3,038.32	.....	4,451.67
Braden & Moore, Tulsa	6,018.15	.....	8,344.76
Braden Co., Tulsa	1,794.96	.....	2,246.08
Bay State Oil & Gas Co., Kansas City, Mo., and Paden Oil Co., Oklahoma City	4,872.33	.....	6,387.29
Bay State Oil Co., Kansas City	.....	.....	18,069.19
*James Ballard, Cushing	.....	.....	7,465.91

Pocket Size

If you are responsible for accurate pressure control of oil, gas, water, steam or air, you cannot afford to be without this little book.

It describes briefly and completely the Mason Regulators most used in the oil industry.

Over 43 years of practical experience in the design and manufacture of pressure control apparatus is the foundation upon which Mason Regulators have achieved a world wide reputation.

You will find Mason Regulators in the oil fields wherever performance counts. Send for the booklet today.

Mason Regulators Include:

Casing Head Gas Regulators for back pressure relief or for regulating the amount of vacuum in a vacuum system.

Liquid Level Controllers for maintaining the desired level in stills, absorber towers, receivers, etc.

Gas Burner Regulators for gas pressures up to 250 pounds.

Reducing Valves for oil, gas, water, air.

Pump Speed Governors for controlling direct acting steam pumps or process work, booster lines, etc.

Balanced Valves, rotary shaft type.

Pipe Line Strainers.

Mason Regulators

MASON REGULATOR CO.
Boston, Mass.

1087

Muskogee, Oklahoma	Los Angeles, Calif.	Houston, Texas
Atlas Supply Co.	Warren & Bailey Co.	J. A. Rossiter Co.

Name and address—	Oil barrels	Gas M. feet	Cash received
*I. L. Brame, Los Angeles			23,049.58
*Thomas N. Berry, Stillwater			16,119.56
Brownlee & Martin, Tulsa	3,972.50		5,175.94
*Beico Royalties, Inc., New York City			59,960.45
*James Brazell, Oklahoma City	2,712.22		3,630.88
*James Brazell, Oklahoma City			181.52
*Bermont Oil Co., Bristow	4,747.16	3,599	6,795.26
*George Baker, Maramec			2,226.67
*Earl Berryhill, Sapulpa			3,578.13
Joe Ray, Bradley	3,973.46		4,643.86
*Joe Ray, Bradley	6,103.02		7,474.35
*E. R. Bechtel, Blackwell	4,395.27		7,136.32
*L. J. Burkhalter, Blackwell			3,622.07
*W. E. Brown Co., Tulsa			92,714.15
*Cora Lee Brown, Tulsa			1,218.77
*W. S. Billings, Long Beach, Calif.			2,413.32
*George M. Billings, Long Beach, Calif.			2,564.16
*C. O. Buckles, Tulsa			2,115.42
C. H. Bradfield, receiver, Tulsa			4,865.58
*C. H. Bergquist, Okmulgee	3,403.65		4,523.32
Beggs Oil & Gas Co., Okmulgee			7,299.46
*J. S. Bearden, Okemah			2,679.54
Frank Buttram, Oklahoma City			14,595.32
*Charles Brigham, Chickasha			2,108.51
Powell Briscoe, Chickasha			5,405.80
*F. M. Beveal, Enid			4,224.67
Black-Sivalls & Bryson, Bartlesville	3,974.24		7,182.16
*T. J. Baker and A. D. Adcock, Okmulgee			9,642.02
*J. H. Bock, Muskogee			3,033.59
*William C. Breed, New York City			2,890.13
C			
*C. Guy Cutlip, Wewoka			3,697.84
*Joe Carter, Wewoka			28,466.77
*Samuel J. Caudill, Tulsa	1,557.64		2,131.20
J. R. Cole, Jr., Tulsa	6,498.14		9,118.93
*Crude Oil Royalties Corp., N. Y. City			22,603.10
Coline Oil Co., Okla. City	7,544.81		9,448.83
Cushing Refining & Gasoline Co., Cushing			10,910.75
*Cal-Cui Oil Co., Okmulgee			15,718.47
*Annie S. Cook, Muskogee			11,603.10
*W. E. Cruce et al, Ardmore	4,199.68		6,761.76
*Central National Bank, Okmulgee			4,973.39
Cortez Oil Co., Tulsa	6,743.21		7,897.96
Coline Oil Co., Okla. City	70,101.63		71,581.57
*A. V. Cluck, Seminole			15,045.89
J. H. Carlock, Ardmore			5,859.99
Continental Oil & Refining Co., Independence, Kans.	7,675.20		9,374.09
J. S. Canary, Littleton, Colo.			5,803.39
*Commercial Drilling Co., Tulsa	7,977.94		10,269.94
*Commercial Drilling Co., Tulsa	4,192.73		5,082.26
*Cushing Refining & Gasoline Co., Cushing (suspense acct.)			8,885.95
*W. L. Cheatham, Bristow			2,058.46
*John T. Cooper, Wewoka			2,101.94
Creo Oil Co., Tulsa	7,093.19		8,517.79
Cameron Refining Co., Ardmore	55,555.86		68,809.71
*Dillard H. Clark, Tonkawa			3,640.70
*Dillard H. Clark, Tonkawa			7,281.46
*Continental Oil Co. of Texas, Wichita Falls, Tex.	1,048.40		8,387.21
Champlin Refining Co., Enid			229,046.08
Carter Oil Co., Tulsa	6,584,658.06		8,675,730.88
Carter Oil Co., Tulsa			762.99
Carter Oil Co., Tulsa			169,337.66
Carter Oil Co. for M. E. Killingsworth, Tulsa			2,283.65
*Cushing Refining & Gasoline Co., Cushing			13,916.10
Continental Oil Co., Denver, Colo.	27,068.90	27,622	36,304.00
*Continental Oil Co. Denver, Colo			96.35
Comar Oil Co., St. Louis, Mo.	1,388,501.01		1,903,098.96
Comar Oil Co., St. Louis, Mo.		2,592,179	78,305.06
Central National Oil Co., Okmulgee			8,522.06
Carson Oil Co., Okmulgee			9,324.27
*Edwin B. Cox and Jake L. Hamon, Ardmore			24,153.62
*Colonial Royalties Co. and J. P. Cappeau, Tulsa			4,572.23
*Geo. S. Carmon, Bristow			2,179.50
*I. M. Clubb, Kaw City	13,823.91		19,042.81
*Laura A. Clubb, Tulsa			19,108.73
Cumberland Petroleum Co., Cleveland, Ohio	14,219.20		18,256.64
Lee Cruce, Ardmore			3,586.21
*Minnie J. Chamblee, Wewoka			1,955.68
*Joe Carter, Wewoka			63,177.45
Crown Petroleum Corp., Houston, Tex.			4,229.95
*J. O. Chapman, Waxahachie, Tex.			3,380.80
N. T. Gilbert, receiver for Cotton Belt Petroleum Co., Tulsa	19,697.38		26,438.43
W. E. Conner, Gotebo			5,065.76
C. R. Colpitt, Collinsville			6,476.51
*W. M. Case, Blackwell	1,699.16		2,449.91
*Wm. S. Cline, Newkirk			2,845.75
*Wm. S. Cline, trustee, Newkirk			2,870.28
*Wm. S. Cline, trustee, Newkirk			2,405.29
*Clark and Cowden, Duncan			47,325.89
Cudahy Oil Co., Cleveland, Ohio	13,338.03		15,898.95
*K. G. Calvery, Fox			4,174.32
*R. W. Coe, Ardmore			3,527.75
*Lee Cruce et al, Ardmore	3,937.44		4,376.00
Cruce & Potter, Ardmore	831.49		1,068.19
Champlin & Bass, Inc., Holdenville	7,210.60		9,439.56
*L. E. Crews' heirs, Enid	1,607.70		2,416.25
*L. E. Crews, guardian, Enid			96.02
*Laura E. Crews, Enid			1,532.28
Crews estate, Enid	11,253.94		18,385.81
S. C. Canary, Tulsa	6,154.02		7,582.64
Lawton Corp., Okla. City	1,439.90		5,292.22
*W. C. Cosey, Wewoka			4,366.57
G. W. Connelly, Caney, Kans.			14,042.56
*Arthur H. Chamblee, Wewoka			9,575.24
Clarion Oil Co., Houston, Tex.	6,347.86		8,174.69
Continental Oil Co., Tulsa	10,295.35		15,842.96
Calsow Oil Co., Tulsa	6,374.43		7,673.30
Carson Oil Co., Okmulgee			6,298.87
*Noah J. Caves, Stroud			2,920.14
*J. A. Chapman, Tulsa	8,829.43		13,699.08
*Chas. Charpiot, Kansas City, Mo.			9,869.85
*Mrs. J. P. Chamble, Wewoka			3,296.65
*Elizabeth R. Crockett Hayes, Okla. City			14,499.33
D			
*Dover Investment Co., Bartlesville	1,824.18		2,486.01
*B. F. Davis, Wewoka			7,344.30
Denver Producing & Refining Co., Okmulgee			103,998.70
Devonian Oil Co., Tulsa	111,145.31		159,095.63
Delaware Consolidated Oil Co., Tulsa	21,924.62		25,337.56
*J. F. and Mary Dowell, Stroud			2,064.43
*P. C. Dings, Chicago, Ill.	3,158.33		3,982.84
J. C. Dillard, Ardmore	1,759.22		3,401.21
*H. H. Darks, Okla. City			4,448.31
*U. T. Duncan, Braman			3,648.72
L. R. Davis, Tulsa	69,058.59		92,542.84
H. C. Detrick, Okmulgee	7,506.69		9,421.90
*O. H. Douglass, Okmulgee			3,672.32
*J. H. Dillard, Ardmore	5,588.86		6,563.38
*Harry H. Diamond, Holdenville			2,630.02
Howard Duffield and Berlin, Tulsa			5,330.92
*J. N. Dobbs, Earlsboro			8,786.05
*Elmer Dickason, Geuda Springs, Kans.			3,464.47
*L. S. Dolman, Ardmore			2,461.47
*Annie Day, Earlsboro	4,659.13		6,166.45
*J. F. Day, Earlsboro	2,337.94		3,094.27
*J. C. Doneghy, Tulsa			2,713.72
*J. C. and James Doneghy, Tulsa			219.05
*Frank Duncan et al, Tulsa			3,962.10
*Mont R. Davis, Seminole			19,454.58
*C. P. Davis, Tulsa			2,402.47
*Clarisa Diveley, Covington			2,649.94
Daisy Bell Petroleum Co., Ardmore	7,880.93		9,457.97
*Hector Derdeyn, Pauls Valley			2,017.99
Darby Petroleum Corp., of N. Y., Tulsa	72,513.39		94,738.45
*Delk Investment Corp., St. Louis, Mo.			5,827.79
*Burchard Denker, Enid			2,139.85
Deep Rock Oil & Refining Co., Tulsa			79,250.98

DEPENDABILITY

Patented Oct. 6, 1925—Other Patents Pending

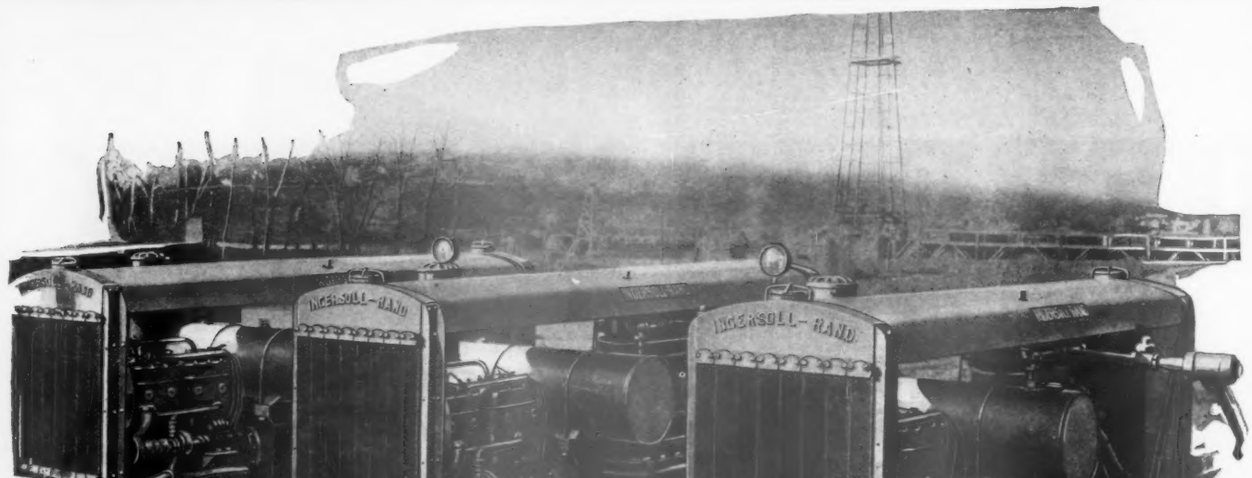
Long Experience, carefully inspected Special Alloy Steel, skilled workmen, modern machinery and methods are combined to assure in SPANG WELDLESS JARS, the dependable quality which gives you that feeling of ease and satisfaction when the tools are equipped with Spang Jars.

Are you using SPANG WELDLESS JARS, the most dependable Jars made today?

Spang and Company
BUTLER, PENNA.

Sold By All Leading Supply Houses

Patented Oct. 6, 1925—Other Patents Pending



Ingersoll-Rand High-Pressure Portable Compressors in a semi-permanent installation on Air and Gas Lift work in the Seminole field.

Solve Each Pumping Problem Individually

The Ingersoll-Rand High-Pressure Portables have proved their great value in experimental pumping work.

Wells in all stages of production have been surprisingly benefited by the use of Gas or Air Lift Systems of pumping. Wells which have followed natural production declines to a point at which they are normally put on the pump jack or beam usually show such marked increase in production with application of gas or air lift the producer is assured of profitable returns which justify permanent plant installations.

Although such performances are being repeated weekly, no one is able to say exactly what results can be obtained from any certain well.

The best means of determining these working conditions is by trial. The most economical trial is by means of Ingersoll-Rand High-Pressure Portable Compressors.

These I-R High-Pressure Portables have been successfully used many times for just this purpose. Their design and manufacture make them ideal units for this experimental work.

These machines are stocked in local warehouses throughout the oil fields and so are ready for immediate delivery.

INGERSOLL-RAND COMPANY, 11 Broadway, New York City

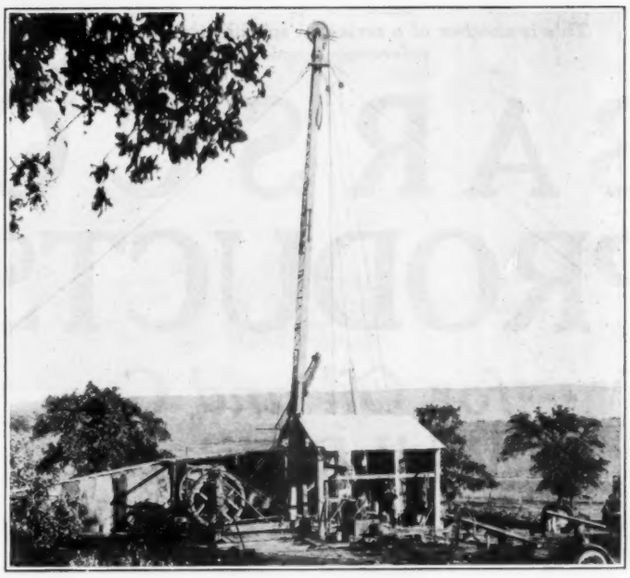
Offices in principal cities the world over.

Butte, Mont.	Dallas, Texas	New Orleans, La.	St. Louis, Mo.
Los Angeles, Cal.	El Paso, Texas	Tulsa, Okla.	Seattle, Wash.
San Francisco, Cal.			Salt Lake City, Utah

118-PC

Ingersoll-Rand

Name and address—	Oil barrels	Gas M. feet	Cash received
The Dallas Co., Tulsa			5,769.28
Delmar Oil Co., Bartlesville	40,192.74		55,725.61
Dixie Oil Co., Inc., Shreveport, La.			549,346.95
*J. F. Darby, Muskogee			2,668.95
E			
W. H. Elson, Tulsa			12,383.49
*T. T. Eason, Enid			2,568.57
*C. C. Endicott est., Tonkawa			4,282.31
Echo Oil Co., Tulsa	7,313.55		9,263.71
Eagle Picher Lead Co., Henryetta	1,961.37		5,737.05
Lewis Emery, Jr. & Sons, Bradford, Pa.	11,296.73		14,294.59
Elm Oil Co., Tulsa	15,287.96		19,413.96
*Elm Oil Co., Tulsa	2,810.35		3,815.51
English Drilling & Prod. Co., Cement	27,831.18		59,495.90
Edgwood Oil Co., Tulsa			11,246.91
*Laura A. Endicott, Long Beach, Calif.			9,805.16
*T. H. Endicott, Los Angeles, Calif.			4,137.23
Enfisco Oil Corp., Tulsa	13,110.24		16,584.94
Elliott & Smith, Tulsa	11,395.67		16,339.40
*W. C. Elliott, Tulsa			530.80
Elliott & Vensel, Tulsa			8,393.55
Enid Bank & Trust Co., Enid			16,497.79
T. T. Eason, Enid	5,006.85		6,262.93
*T. T. Eason, Enid	17,157.05		24,194.16
*T. T. Eason, Enid	3,312.37		5,896.25
Empire Gas & Fuel Co., Bartlesville	856,932.01		1,140,228.91
Empire Gas & Fuel Co., Bartlesville			22,494.82
Empire Gas & Fuel Co., Bartlesville			12,219.15
Empire Gas & Fuel Co., Bartlesville (royalty)			13,865.23
*Empire Petroleum Co., Bartlesville (suspense)			160,375.52
*Laura A. Endicott, Los Angeles			5,038.63
F			
*James F. Foster, Anthony, N. Mex.			4,846.20
D. C. Fitzgerald trustee, Ardmore	7,036.55		8,746.88
D. W. Franchot & Co., Tulsa	44,560.30	1,109,663	61,404.53
*Streeter B. Flynn, Okla. City			1,109.20
*Wirt Franklin, Okla. City	2,475.68		2,801.64
*Wirt Franklin and Mary C. Cates, Okla. City	3,262.86	590	3,709.34
*W. H. Franks, Seminole			53,666.63
Fern Oil & Gas Co., Yale			15,724.17
*G. W. Frazier, Checotah			35,459.65
Fox Petroleum Co., Ardmore			6,325.22
Finance Oil Co. and Livingston Oil Co., Gowanda, N. Y.	18,450.83		23,539.81
*S. M. Fugate guardian, Maramec			2,988.42
*K. C. Farwell, Chickasha			7,187.62
Foster Petroleum Corp., Bartlesville	160,689.20		224,927.23
*Foster Petroleum Corp., Bartlesville			26,635.27
Foster & Davis, Inc., Bartlesville	9,433.01		11,916.06
Foster Oil Co., Tulsa			14,780.84
J. A. Fulp, receiver, Sapulpa	3,732.93		6,525.10
Fogar Oil & Gas, Garber	7,017.47		13,000.80
*J. C. Fane, Wewoka			2,770.30
*Fleet & Osborn, Ada			4,088.97
*John J. Fleet, estate, Ada			6,936.39
*W. B. Osborn, Ada			3,774.05
*D. F. Fleet, Ada			6,901.34
*Mildred A. Frederick, Santa Monica, Calif.			4,165.79
*Geo. Frederick, Santa Monica, Calif.			3,994.19
*A. L. Frederick, Santa Monica, Calif.			3,994.20
*Fred Frederick, Santa Monica, Calif.			5,996.57
*Wirt Franklin, Ardmore	8,371.69		9,658.31
Wirt Franklin, Ardmore	91,314.02		116,879.65
Fox Royalty Co., Ardmore	9,078.00		10,950.58
*Fox Royalty Co., Ardmore	4,242.97		4,984.10
*F. H. Funston, Shawnee			6,330.44
Flora Okla. Oil Co., Cement	5,539.25		7,002.89
Gus Forbes, Okmulgee	6,197.92		7,836.12
Fifty-Nine Osage Oil Co., Bartlesville	33,126.44		41,786.82
*N. B. Feagin, Duncan			8,111.65
*W. W. Fondren, Houston, Tex.	2,198.17		2,811.47
*S. M. Fugate, Maramec			2,366.60
The 45th Oil Co., Chicago, Ill.	4,895.00		6,003.68
*J. P. Flannigan, Tulsa			3,616.42
*H. G. Fair, J. S. Patterson and L. B. Norton, Okmulgee			3,511.00
*J. T. Fennell, Pauls Valley			4,044.93
Fort Ring Oil & Gas Co., Fort Worth, Tex.			9,130.96
*Fuhrman Petroleum Co., Okmulgee			1,168.89
Fuhrman Petroleum Co., Okmulgee			14,774.25
G			
Mary Gallais, Tulsa	2,135.15		3,729.70
Gilmer Oil Co., Ardmore	168,006.88		200,951.25
*Galer Oil Co., Tulsa			11,687.68
*Edw. Gaist, estate, Coon Rapids, Iowa			3,232.62
*J. Wood Glass, Nowata	3,579.65		4,438.32
*W. E. Grisso, Seminole			205,288.18
*C. W. Goltry, Enid			2,287.10
*Ethel Glenny, Blackwell			4,795.31
*Walter H. Grant, Ardmore	2,459.59		3,077.69
*Mabel and J. D. Garner, Wewoka			8,206.50
Galvez Oil Corp., Tulsa			17,500.41
*Edw. Galt, Ardmore	2,541.25		3,989.73
Edw. Galt, Ardmore	4,219.31		4,958.14
Goldelline Oil Corp., Oklahoma City	37,444.19		51,329.29
*F. H. Greer, trustee for Petroleum Royalty Co., Tulsa			25,894.11
Gilcrease Oil Co., Tulsa	21,551.00		29,203.77
Geo. M. Gillett, trustee, Baltimore, Md.	2,044.80	2,734	3,000.86
Gilliland Oil Co., Tulsa	25,713.24		35,833.45
Gardner Petroleum Co., Tulsa	38,776.81		54,033.10
*Annie Gahagan, Wewoka			23,679.18
*Est. W. A. Graham, Clanan, Pa.			3,192.45
Jos. H. Graham, Bartlesville	8,363.19		10,964.36
Gessel Drilling Co., Tulsa			6,911.28
*A. F. Gilstrap, Wewoka			2,798.55
Gates Oil Co., Ardmore	10,330.29		12,298.56
*C. B. Goddard, Ardmore			2,746.96
Gypsy Oil Co., Tulsa		2,808	154,590.82
Gypsy Oil Co., Tulsa		513	23,414.79
Gypsy Oil Co., Tulsa	2,529,495.14		3,381,894.00
Gypsy Oil Co., Tulsa	401,711.80		525,415.38
Gypsy Oil Co., (royalty), Tulsa	2,128.28		2,652.99
Glidden Oil Corp., Tulsa			35,276.56
F. A. Gillespie & Sons, Tulsa			30,694.21
Gillespie and Crosbie Gasoline Plant, Tulsa			2,936.01
*C. E. Groesbeck, New York City			2,884.58
*Alice B. Groesbeck, New York City			352.17
John B. Grieves, Terlton			15,627.18
The Gordon Trust Co., Cement			16,883.04
Garvin Drilling Co., Duncan			21,006.45
H			
Hightower, W. E., Oklahoma City	12,354.23		21,409.28
C. C. Harmon, Nowata	923.27		1,142.58
Reed & Harmon, Nowata	5,260.87		6,750.79
Glass & Harmon, Nowata	10,856.92		15,237.48
Harmon and Glass & Robertson, Nowata			748.45
Harmon & Robertson, Nowata			879.64
*E. N. Horton, Ardmore			2,509.03
E. P. Harwell, Tulsa			10,029.67
*W. E. Hightower, Oklahoma City	31,292.87	278	41,914.25
*E. L. Harris, Wewoka			18,387.94
*E. L. Harris, Wewoka			3,640.34
*S. J. & W. L. Harnstadt, New York City			2,394.40
*Nora Hernstadt, New York City			4,986.47
*S. J. Hernstadt, trustee, New York City			6,520.41
W. T. Hales, Oklahoma City	78,874.89	55	97,693.64
W. T. Hales, Oklahoma City	1,212.99		1,591.28
Hemlock Oil Co., Tulsa	1,525.45	12,644	5,101.39
*Hemlock Oil Co., Tulsa			2,016.00
*Carl B. Haun, Blackwell			4,384.67
Henderson Oil Co., Marietta, Ohio	4,660.84		5,686.35
*Henderson Oil Co., Marietta, Ohio			92.83
Harry Haubury, Duncan	4,695.23		7,359.38
Halsell & Son Oil & Gas, Vinita	2,791.68	32,167	5,515.40
*Ewing Halsell, Vinita			5,683.56
Harold Petroleum Co., Blackwell	13,705.51		21,415.07
*Harold Petroleum Co., Blackwell	2,592.47		3,525.75



Spud in With Columbian

Quality is built into every Columbian Manila Cable and this Quality has proved itself many times because it has meant extra long service.

Quality fibre is especially selected by our own buyers in the Philippines. It receives many extra combings in our preparation department to insure Quality.

Rigid inspections follow each step in the manufacture. The latest designed cordage machinery is correctly adjusted so that the finished Cable will be tough, and yet springy—two qualities for which Columbian is famous.

Spud in with a Quality Cable. Use Columbian.

DISTRIBUTED BY
THE NATIONAL SUPPLY COMPANIES
NSCO

Columbian Rope Company

342-70 Genesee Street

Auburn, "The Cordage City," N. Y.

Branches:
New York Chicago Boston New Orleans

"Drill with Manila"

By Invitation Member
Emblem of BUSINESS CHARACTER
Rice Leaders of the World Association
Recognizing High Standards in NAME - PRODUCT - POLICY

This is another of a series on specifications—keep for reference in ordering.

BARSCO PRODUCTS

---for Oil and Gas Well Drilling

Casing

Shoes

BARSCO Casing Shoes are *punched*, not welded, from the finest quality of *forged steel* having a metal content of carbon 50 to 60 point and tensile strength of 90,000 to 110,000 pounds per square inch. This gives you some idea of the superior quality that is built into Barsco Products—and one of the many reasons why BARSCO is a standard name used by those who want the best.

Size Pipe, Inches	California Pattern Length, Inches	*Texas Pattern Length, Inches	Weight, Pounds
4	16	15	20
4¼	16	15	20
4½	16	15	20
4¾	16	15	25
4⅞	16	15	25
5 3-16	16	15	25
6	16	15	50
6¼	16	15	50
6⅝	16	15	35
8¼	16	15	65
10	16	15	85
12½	16	15	135
14	16	15	150
15¼	16	15	170
16	16	15	165
18	16	15	250
20	16	15	280

*Texas Pattern Casing Shoes are not drilled for rivets unless specified.

Intermediate sizes, also sizes larger or smaller than listed, can be furnished. Note:—Smallest inside measurement is the same as inside diameter of pipe or casing on which shoes are to be used. In ordering, give size, weight, pitch of thread and make of casing on which shoe is to be used and also size and weight of casing through which shoe is to pass.

BARSCO line of casing shoes includes "Bloom Pattern"—"Regular Pattern"—"Rotary Sawtooth"—"Baker Pattern." *There's a BARSCO Casing Shoe for every requirement.*

Stocks carried by Dealers.

BARTLESVILLE SUPPLY COMPANY of Missouri
3400 MAURY AVENUE—ST. LOUIS, MISSOURI
Texas Warehouse: J. G. Lockard, 504 Western Ave, Amarillo, Texas
Export Office: 150 Broadway, New York City

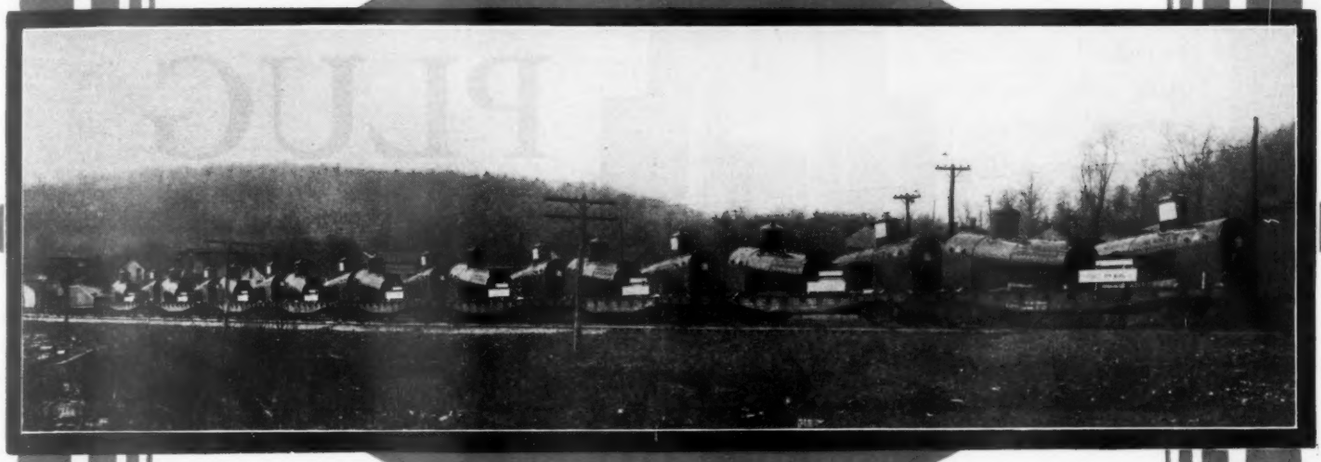
Manufacturer's Representatives

B. & A. Specialty Co., Tulsa, Okla.
Miller Tank & Supply Co., Casper, Wyo.

—Write for Complete Catalog

Name and address—	Oil barrels	Gas M. feet	Cash received
*Mollie V. Heenan, Ardmore			3,021.36
Houston Oil Co., Houston, Tex.	28,130.87		38,715.80
*Thos. J. Horsley, Wewoka			7,345.72
A. N. Hopkins, Wewoka	218.85		3,302.35
Wm. Hanley and J. W. Bird, Bradford, Pa.	6,436.92		8,131.68
*Benj. F. Hall, Las Cruces, N. Mex.			2,469.71
*Alden Hopkins, Davenport	1,354.77		2,175.59
*M. B. Hopkins, Davenport	1,354.77		2,175.59
*Lois E. Highley, Oklahoma City			3,172.98
Healdton Oil & Gas, Enid	24,554.11	9,453	36,212.08
Healdton Oil & Gas, Enid	6,819.26		9,698.87
Herbert Oil Co., Fort Worth, Tex.	5,471.87		7,460.19
*R. E. Hoyt, Covington			2,577.92
Highway Oil Refining Corp., Tulsa	3,989.32		5,120.05
Hiawatha Oil & Gas Co., New York City			5,445.63
Home Gas Co. of Cushing			27,805.12
*Haury, Monahan & Co., Enid			2,509.79
Hambro Oil Co., St. Louis, Mo.	5,536.47		6,870.12
Lewis Z. Harrison, New York City			8,520.23
Helena Oil & Gas, Tulsa	3,939.16		5,316.94
Harris & Haun, Inc., Blackwell			42,360.57
Humble Oil & Refining Co., Houston, Tex.	417,169.65		502,051.38
Humble Oil & Refining Co., Houston, Tex.		Gas	12,108.73
*Homestake Oil & Gas Co., Seminole			196,300.08
*The Hefner Co., Oklahoma City			6,393.43
*N. George Hoddad, Beggs			2,469.45
*J. L. Hull, Seminole			17,984.37
*H. H. Harris, Okmulgee	6,289.70		8,715.27
*B. H. Harrison, Wetumka			2,276.67
Howard, O. R., Tulsa	17,712.38		20,753.09
Harland Oil Co., Walco	18,344.99	3,792	22,185.00
Harland Oil Co., Walco		413	33,241.17
*Mollie E. Howell, Wellington, Kans.			2,254.52
*H. M. Horne, Winfield, Kans.			2,837.53
*G. W. Hicks, Cox			5,638.97
Hansen Oil Co., Tulsa	7,810.17		9,960.73
F. C. Hall, Chickasha			5,405.80
*E. L. Halsell and Butz, Muskogee			2,089.75
Henry Oil Co., Tulsa	7,230.35		12,287.79
*Mollie E. Howell, Wellington, Kans.			2,018.99
Lewis Z. Harrison, New York City	1,987.50		3,537.87
*Walter Hart, Pauls Valley			2,020.53
*A. D. Horton, Hawarden, Iowa			7,775.40
*J. V. Holt, Oklahoma City			1,897.19
*Humphrey, E. R., Enid			2,537.62
*S. B. Hammons, Seminole			2,031.00
*Claude Harber, Seminole			7,372.14
*J. C. Hartley, agent, Garber			13,520.41
*W. E. Hightower, Oklahoma City			2,064.26
*J. A. Hull Co., Tulsa			2,183.33
J. A. Hull Co., Tulsa	172,318.85		234,748.31
*Max Hessleim, New York City			6,709.35
*R. T. Harber, Seminole			7,863.75
*Homaokla Oil Co., Oklahoma City	10,131.50		13,654.88
Homaokla Oil Co., Oklahoma City	46,128.49		49,020.08
*Marie S. Henry, New York City			3,354.03
J. W. Henry, Tulsa	13,527.60		18,992.70
I			
*Independent Oil & Gas Co., Tulsa			5,707.69
Independent Oil & Gas Co., Tulsa			45,592.58
Independent Oil & Gas Co., Tulsa			680,313.06
*Indian Territory Illuminating Co., Bartlesville	13,949.58		24,173.95
Indian Territory Illuminating Co., Bartlesville	2,147,922.50		3,422,958.14
*Indian Territory Illuminating Co., Bartlesville	74,862.27		103,321.13
*Imperial Royalties Co., Kansas City, Mo.	17,858.02		25,389.64
*J. D. Inscore, Duncan			4,435.60
Iron Mountain Oil Co., Tulsa	23,307.48	19,087	29,905.50
*Iron Mountain Oil Co., Tulsa			1,906.25
Imo Oil & Gas Co., Covington			17,752.46
Invader Oil Corp., Muskogee			4,514.30
O. M. Irelan, Sapulpa	7,019.57	63,403	14,052.72
Iowa Oil & Refining Co., Hawarden, Iowa			10,137.92
Interocean Oil Co., Tulsa	81,839.14		106,864.83
Illinois-Oklahoma Petroleum Corp., Duncan	1,790.62	38,230	5,024.73
*Investors Royalty Co., Inc., Tulsa			13,836.43
*Indian Territory Illuminating Co., Bartlesville			3,757.15
J			
R. C. Jones & Co., Inc., Cushing	15,674.14	15,927	23,225.30
*R. C. Jones & Co., Inc., Cushing	377.40		574.13
Johnson Oil Refining Co., Chicago			8,695.93
Josey Oil Co., Tulsa	198,193.43	295,507	291,331.47
*B. F. Johnson and Mary, Fayetteville, Ark.	13,949.58		24,173.96
B. F. Johnson and Mary, Fayetteville, Ark.			22,242.38
*C. W. Johnson, Seminole			3,240.13
*Edmond F. Jackson, Seminole			13,122.02
R. G. Jennings, Pittsburgh, Pa.	12,334.63		17,059.68
E. H. Jennings Brothers Co., Pittsburgh, Pa.	3,770.58		5,211.95
*C. W. Johnston, Seminole			2,718.56
*John B. Jameson, Concord, N. H.			2,312.73
*J. Edward Jones, New York City			6,336.28
*E. H. Johnson, Wellington, Kans.			3,361.47
*Dr. J. A. Jones, Tonkawa			18,378.09
Johneda Oil Co., Tulsa	5,386.76		7,099.39
*J. A. Jones, Tonkawa			2,164.34
*Robert L. Jones, Bristow	4,042.80	16,393	6,901.67
*L. B. Jackson, Sapulpa	5,472.00		7,344.37
*Pearl B. Jackson, Sapulpa			1,933.17
*Junction Oil & Gas Co., Blackwell			8,402.73
Leo Jacobs, St. Louis, Mo.	5,242.73		6,605.33
*B. F. Johnson et al, Fayetteville, Ark.			3,757.15
K			
A. A. Koup and Sarah Koup, Hobart			3,399.21
*W. C. Kilgore, Lindsay			4,082.56
*Kingwood Oil Co., Okmulgee	1,762.50		2,410.86
Kingwood Oil Co., Okmulgee	197,370.17		263,908.79
*W. S. Key, Oklahoma City			11,294.18
*Helen Walker King, guardian, Orange, Calif.			13,537.54
*Helen Walker King, Orange, Calif.			44,645.49
*Frank Knappenberger, Seminole			48,954.39
*Frank L. Ketch, Oklahoma City			4,544.32
*Albert Kelly, Bristow			3,753.05
Kirk Oil Co., Ardmore			12,365.26
*Kistler Petroleum Co., Tulsa	15,101.90		19,931.31
Kewanee Oil & Gas Co., Titusville, Pa.	531,010.56		727,814.02
Keener Oil & Gas Co., Tulsa	41,657.30	3,093	50,502.44
*Keener Oil & Gas Co., Tulsa	1,788.52	10,965	3,059.94
*R. T. and Minnie May Knight, Shawnee			4,734.37
Kawfield Oil Co. and Illinois Refining Co., Slick	3,945.65	12,516	4,995.09
*Kisner Royalty Co., Garber			3,703.69
*R. R. Kisner, Enid			4,594.05
*M. L. Kisner, Enid			4,594.05
Kawfield Oil Co. and Illinois Refining Co., Slick			6,563.52
Knox Petroleum Co., Ardmore	27,458.13		35,705.97
Kay & Kiowa Oil Co., Tulsa			19,157.00
*Charles Klein, trustee, Tulsa	9,113.10		9,631.33
*Killingsworth lease, by Shaffer Oil & Refining Co.			5,971.24
*C. C. Kimble, Beggs			7,956.16
*J. W. Kayser, Chickasha			2,805.56
Kay Oil Co., Blackwell	2,643.86		45,704.19
*Emma B. Kennedy et al, Okemah	3,529.34		5,961.82
George Kinney, trustee, Tulsa	19,921.66		26,051.50
*A. D. Kennedy, Okmulgee			1,971.83
*S. P. Kennedy, Bradford, Pa.	2,147.44		2,855.91
Knupp Oil Co., Warren, Pa.			6,521.13
Willie King, Okmulgee			2,337.51
*John C. Kunkel, Jr., Tulsa			2,825.42
L			
Little Fay Oil Co., Tulsa			199,986.86
Little Fay Oil Co., Tulsa			26,061.44
Lyons Petroleum Co., Denver, Colo.			3,064.23
Lone Star Gas Co., Dallas, Tex.		160	9,524.75
Lone Star Gas Co., Dallas, Tex.	18,002.75		20,760.07
*C. H. Lebow, Tulsa			3,482.04

They're on their way to the Venezuela Oil Fields —



Eighteen Titusville Acme Oil-Well Boilers requiring 9 railroad cars and totaling 1530 horse power, comprised a recent shipment for the South American Oil Fields.

Significant of the complete confidence even the far off South American oil operators have in Titusville Oil Well Boilers,—a confidence founded on many years of proved performance and the certainty of plenty of steam and power for the hardest drilling job.

Do you have descriptive bulletins of the Tico oil field line?

The TITUSVILLE IRON WORKS Co.
TITUSVILLE - PENNA.

SOLE DISTRIBUTORS

The CONTINENTAL SUPPLY COMPANY

For
THE CONTINENTAL
72-76 Trinity Court

Export
WELL SUPPLY CO.
New York City, N. Y.

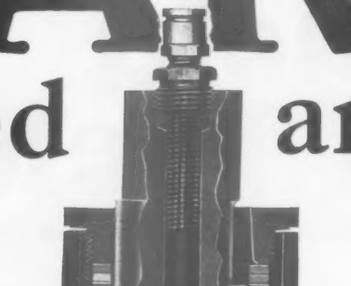
Titusville
Acme Boilers
Single and Twin
Steam Drilling Engines
Tico Gas Engines
Band Wheel and
Geared Powers

Titusville
Acme Rotaries
Acme Swivels
and Speed Draw Works
High Pressure Boilers
Crown Blocks
Slush Pumps

RUGGED - ENDURING

BARCO

balanced and lubricated



PLUG VALVES

for drilling and reaming rigs

WATER and air lines used with drilling or reaming rigs often have to handle a lot of solids in suspension. A Barco Plug Valve in such lines is unaffected by these solids. It wipes the seat clean at every operation. It is balanced and lubricated and therefore will not stick.

It is an ideal valve for field use because it requires practically no maintenance. An occasional turn on the lubricating screw is all it needs. The lubricant in Barco valves is used for lubricating purposes and it is not used hydraulically, to push the plug from the seat. The valves are, therefore, very economical to operate. You appreciate Barco valves most on the remote locations far from new material and supplies and repair shops.

Try a Barco where the service conditions are hardest—whether for gas, oil, air or water. Ask for Bulletin No. 306.

Barco Manufacturing Company

1801 Winnemac Avenue Chicago, Illinois

On exhibition at the International Railway General Foremen's Convention, September 6 to 9, and at the Traveling Engineers' Convention, September 13 to 16.

BARCO

Valves and Joints

O&GJ 8-25-Gray

Name and address—	Oil barrels	Gas M. feet	Cash received
*C. B. Lynch, Tulsa	.....	.....	4,558.92
*B. D. Lock, Wewoka	.....	.....	6,176.02
Little Nick Oil Co., Chickasha	.....	.....	12,634.01
*Florence Lindley, Sapulpa	.....	.....	5,409.04
Lewis R. Lewis, Tulsa	5,040.52	.....	5,825.03
*Louis Windler, Enid	.....	.....	2,547.91
*John Lahman, Altus	.....	.....	8,342.62
Little Ed Oil Co., Tulsa	6,378.93	.....	8,816.01
T. E. Laselle, Ada	.....	.....	9,920.38
Louisiana Oil Refining Corp., Shreveport, La.	10,157.17	.....	13,999.61
*Louisiana Oil Refining Corp., Shreveport, La.	.....	.....	257.09
*W. T. Laughlin, Oklahoma City	.....	.....	4,517.56
*O. M. Lancaster, Los Angeles, Calif.	.....	.....	2,113.23
*LaForce & Ferguson, Limon, Colo.	.....	.....	3,893.27
*Bert Lackey, Chickasha	.....	.....	1,998.12
Lima Oil & Gas Co., Bartlesville	2,966.85	306,750	28,171.33
Laurel Oil & Gas, Tulsa	46,639.09	.....	59,238.45
J. F. Lloyd, Ada	.....	.....	5,346.74
C. H. Luengene, Tulsa	3,112.60	.....	5,290.21
*C. F. Lynde, Muskogee	.....	.....	3,318.02
A. M. Landon, Independence, Kans.	8,960.60	.....	11,531.06
*Maggie E. Loman, Austin, Tex.	.....	.....	3,086.25
*Maggie E. Loman, guardian, Austin, Tex.	.....	.....	3,086.25
*Maggie E. Loman, guardian, Austin, Tex.	.....	.....	3,086.25
*Nancy J. Laughlin, Cushing	.....	.....	4,106.64
E. B. Lawson, Nowata	5,599.00	.....	6,84[illegible]
*E. C. Lawson, Nowata	.....	.....	122.62
*E. B. Lawson, Nowata	858.11	.....	1,047.44
*R. C. Lawson, Nowata	.....	.....	409.12
*Lawson & Whitehill, Nowata	.....	.....	2,236.82
Lawson & Griffin Prod., Nowata	.....	.....	70.02
*Loman estate, Okmulgee	.....	.....	10,766.24
*Park B. Lamberton, Tulsa	.....	.....	1,297.06
*W. T. Laughlin, Oklahoma City	.....	.....	10,984.64
*Erick S. Lagerquist, Brooklyn, N. Y.	.....	.....	2,896.33
*Henry Lytal, Henryetta	.....	.....	3,475.[illegible]
*W. H. Livermore, Inc., Chickasha	.....	.....	2,809.26
*W. H. Livermore, Inc., Chickasha	.....	.....	2,050.02
*W. G. Lackey Co., Tulsa	.....	.....	7,229.41
Large Oil Co., Bartlesville	4,778.65	.....	7,664.92
LeFlore County Gas & Electric Co., Poteau	.....	.....	9,558.86
Lambert Oil & Gas, Tulsa	.....	.....	5,026.38
Link Oil Co., Tulsa	12,150.72	.....	16,191.00
*Robert L. Laughlin, Alva	.....	.....	3,000.74
M			
Marland Oil Co., Ponca City	942,649.66	.....	1,287,638.72
Marland Oil Co., Ponca City	.....	1,432.450	40,685.80
*Marland Employes Royalty Co., Ponca City	.....	.....	21,087.96
Mid-Continent Petroleum Corp., Tulsa	1,934,208.23	.....	2,573,564.[illegible]8
Mid-Continent Petroleum Corp., Tulsa	.....	.....	100,889.12
*Mid-Continent Petroleum Corp., Tulsa	.....	.....	258.98
Magnolia Petroleum Co., Dallas, Tex.	3,393,554.52	.....	3,901,657.55
Magnolia Petroleum Co., Dallas, Tex.	.....	.....	169,392.79
*Magnolia Petroleum Co., Dallas, Tex.	86,568.82	.....	110,[illegible]60.31
*Magnolia Petroleum Co., Dallas, Tex.	.....	.....	4,153.63
Magnolia Petroleum Co. for K. S. Woolery, Dallas, Tex.	74,872.23	.....	100,[illegible]65.20
*Magnolia Petroleum Co. for W. H. Franks	.....	.....	3,075.70
Magnolia Petroleum Co. for Fixco lease, Dallas, Tex.	.....	.....	23,784.39
Magnolia Petroleum Co. for Ben Vance, Dallas, Tex.	4,068.06	.....	4,856.06
Magnolia Petroleum Co. for O. D. Strother, Dallas, Tex.	.....	.....	10,[illegible]61.02
Magnolia Petroleum Co. for various owners, Dallas, Tex.	.....	.....	166,726.42
Magnolia Petroleum Co. for Emma Coker	7,918.39	.....	9,[illegible]81.25
D. B. Mason, Tulsa	20,303.10	.....	25,650.48
*D. B. Mason, Tulsa	.....	.....	459.38
McMan Oil & Gas Co., Tulsa	72,052.43	.....	97,804.61
*McMan Oil & Gas Co., Tulsa	.....	.....	847.00
W. C. McBride, Inc., St. Louis, Mo.	.....	.....	6,287.52
*W. C. McBride, Inc., St. Louis, Mo.	.....	.....	2,845.82
*Floyd McCaughtry, Chickasha	.....	.....	1,797.53
*J. H. Maxey, Oklahoma City	.....	.....	10,403.36
Mohan Oil Co., Tulsa	7,180.66	39,893	12,861.94
Marleen Oil & Gas, Blackwell	10,324.25	.....	14,[illegible]40.98
*J. M. Malone, Seminole	.....	.....	6,677.34
Mountain State Oil Co., Bartlesville	25,001.28	.....	31,949.01
McCulloch Oil Co., Okmulgee	161,534.09	45,877	314,927.31
*Pearl McAnnich, Tonkawa	.....	.....	2,353.19
*John Meier, Hunter	.....	.....	4,013.01
*Dr. E. H. Merkley, New York City	.....	.....	22,326.48
*Carrie L. McClure, McAlester	.....	.....	6,646.92
*John J. Moran, Boston, Mass.	9,600.88	.....	12,605.72
*W. F. McDaniel, Blackwell	.....	.....	3,019.79
*Sophia S. Mussellem, Muskogee	4,148.85	.....	5,[illegible]30.92
*J. M. Macdonough, New York City	.....	.....	6,29[illegible].45
Clint Moore estate, Tulsa	.....	.....	22,404.67
J. H. Markham, Jr., Tulsa	.....	.....	33,210.26
*Albert Meier, Enid	.....	.....	4,013.01
Meridian Gas Co., Dallas, Tex.	.....	205	16,800.96
Midco Oil Corp., Tulsa	21,092.10	.....	28,095.03
Midwest Gas Co., Tulsa	.....	.....	8,851.82
Mid-Kansas Oil & Gas Co., Findlay, Ohio	.....	227	15,741.85
Mid-Kansas Oil & Gas Co., Findlay, Ohio	288,109.66	.....	376,776.38
Ward S. Merrick, Ardmore	.....	.....	6,437.12
F. W. Merrick, Ardmore	.....	.....	44,168.06
*F. W. Merrick, Ardmore	.....	.....	1,478.48
Ward S. Merrick et al, Ardmore	.....	.....	6[illegible]3.40
*Sarah J. Mahoney, Tonkawa	.....	.....	7,425.14
*E. W. McCrary, Tulsa	.....	.....	2,586.09
*Mable Dale Potts, Yale	.....	.....	3,363.18
*R. J. Metcalf, Fort Worth, Tex.	17,063.47	.....	22,591.73
*Monarch Royalty Co., Kansas City, Mo.	.....	.....	16,011.32
E. R. Minshall, Tulsa	12,579.57	.....	17,346.45
*E. M. Mullendore, Ardmore	.....	.....	16,238.41
E. M. Mullendore, Ardmore	.....	.....	11,304.17
*Sarah Mullendore, Cleveland	.....	.....	2,370.72
*Mabel Ringling, Ardmore	3,188.35	.....	3,708.04
*H. L. Marshall, Duncan	.....	.....	2,053.48
*Mississippi Valley Trust Co., St. Louis, Mo.	3,543.47	.....	8,573.41
*George M. Mayhue, Ada	.....	.....	83,277.50
*George M. Mayhue, Ada	39,750.04	.....	70,757.68
*Dr. E. H. Merkley, New York City	.....	.....	5,749.40
H. W. McClintock et al, Bartlesville	1,167.66	.....	1,994.09
Mul-Berry Oil Co., Cushing	46,315.86	271,489	88,050.90
Magee & Stipe, Electra, Tex.	.....	.....	5,677.29
*H. L. Ward, agent for Andy McInturff, Morris	.....	.....	3,296.60
*Ray Meadors, Wetumka	2,252.90	.....	2,912.03
*I. F. Miller, Norman	.....	.....	4,776.35
*W. A. McDougal, Sapulpa	2,302.81	.....	3,259.72
*Annie Meyer, Sapulpa	.....	.....	4,038.54
*Million & Thomas, McAlester	4,222.69	.....	4,504.35
*J. H. McBirney, Tulsa	.....	.....	2,289.42
*B. F. Melton, Duncan	.....	.....	8,770.71
*M. S. Musselem, Muskogee	.....	.....	4,483.03
*Mark D. Mitchell, Independence, Kans.	.....	.....	2,142.95
*S. H. McKee, Tonkawa	.....	.....	5,319.11
*Alice Clark Myers, Santa Fe N. Mex.	.....	.....	7,502.16
Myers & Mitchell, Okmulgee	5,022.26	.....	5,752.69
I. R. McQueen, Okla. City	3,928.83	.....	5,302.85
*Lawrence D. Miller et al, Okmulgee	.....	.....	1,992.01
C. L. McMahan, Inc., Tulsa	48,124.35	.....	52,013.17
Margay Oil Corp., Tulsa	90,151.80	.....	117,380.49
Minnehoma Oil & Gas Co., Tulsa	111,784.18	347,892	178,917.01
Moran-Jackson & Roame, Tulsa	19,903.70	.....	25,685.41
Midland Securities Co., Tulsa	5,288.12	8,448	7,614.54
F. D. Misener, Tulsa	8,150.62	2,471	10,617.17
Midland Oil Co., Bartlesville	.....	.....	5,716.57
Midland Oil Co., Bartlesville	44,229.44	.....	56,727.45
*Philip Meirowitz, New York City	.....	.....	5,442.59
*Philip Meirowitz, New York City	.....	.....	2,934.49
*H. Mason, Seminole	.....	.....	6,677.84
F. W. Merrick and R. W. Coe, Ardmore	13,960.06	.....	17,341.23
Mudge Oil Co., Pittsburgh, Pa.	22,141.11	.....	23,000.59
Malernee Oil Co., Okla. City	.....	.....	18,020.52
*E. H. Moore, Tulsa	2,977.04	.....	4,511.35
W. A. Merkley, Brooklyn, N. Y.	.....	.....	3,212.05
*Dr. E. H. Merkley, New York City	.....	.....	2,504.43
*Geo. M. Mayhue, Ada	.....	.....	30,824.66
*C. L. McMahan, Inc., Tulsa	.....	.....	3,540.84

PATRICK CARBON
for Diamond Core Drilling

"Specify Patrick Carbon"

OUR idea of building a business is to have it rest upon the bed-rock of satisfaction. We consider no carbon transaction as finally closed until the buyer is completely satisfied.

SEND FOR BOOKLET

You can get in touch with our representative by wiring Duluth office

R. S. PATRICK
Duluth, Minnesota, U.S.A.
Cable Address, "Exploring" Duluth

New
25th Edition

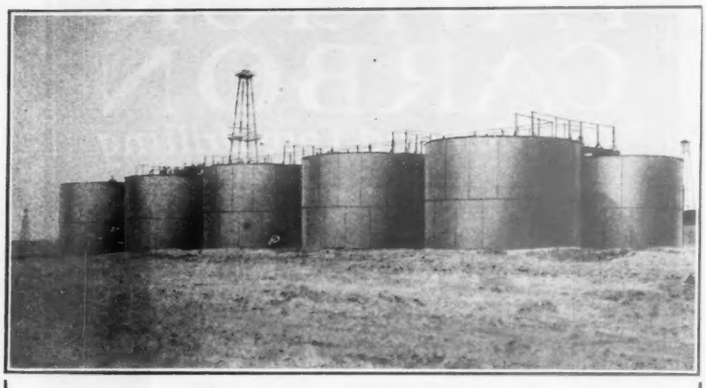
STANDARD OIL BOOKLET

This Booklet contains description of properties, annual reports for 1926, dividend rates, price ranges and other important information relative to this group of companies.

Copy on request

CARL H. PFORZHEIMER & CO.
(Specialists in Standard Oil and Miscellaneous Oil Securities)
25 Broad Street New York, N. Y.

KEYSTONE COPPER STEEL



MALONEY TANKS

Appeal to "Close Buyers"

MALONEYS are invariably the choice of those "close buyers" who give consideration to all angles of cost as related to service,—for MALONEY Bolted Steel Tanks give *definitely longer service at no greater initial cost.* This longer life is gained by the use of rust-resisting Keystone Copper Steel. Impartial tests have proved copper steel to be the most durable type of sheet steel ever developed.

Other MALONEY advantages are *superior tightness* resultrng from our patented "crimp" at seams and joints, *great strength* insured by adequate reinforcing, *cleaning out plates* set flush with bottoms, the *best valve and thief-hatch equipment* obtainable.

Illustration shows ten 1,000-bbl. MALONEYS in use by Carter Oil Company on Sue Walker No. 3, near Seminole.

"Alone in Quality"

MALONEY TANK MFG. COMPANY
Tulsa, Okla.
Distributors at All Principal Petroleum Points

Sizes: 12 to 3,000 Barrels

Packed in Steel-Bound Crates for Export

Howell Aluminum "3-in-1" Vacuum Pressure Valve and Thief-Hatch—The BEST and LATEST Deck Equipment—POSITIVE Safety.

MADE OF KEYSTONE COPPER STEEL

MALONEY PATENTED BOLTED COPPER-STEEL TANKS

MADE OF KEYSTONE COPPER STEEL

MALONEY
ALONE!

Name and address—	Oil barrels	Gas M. feet	Cash received
*Eva R. McAlpine, Okla. City			2,149.68
J. F. Murphy, Sapulpa			14,267.47
*Mary B. McAlester, McAlester			6,646.92
*Manufacturers Trust Co., New York City			2,653.38
*Annie Meyer, Sapulpa			11,383.92
N			
*W. A. Norton, Amoret, Mo.			4,234.69
*R. B. Nor h, Blackwell			13,577.92
W. C. Norris, Tulsa			16,742.77
*D. J. Nichols, guardian, Sapulpa			2,080.65
J. M. Noble, Okla. City			10,316.89
*New Royalty Co., Ponca City	5,609.61		8,218.78
National Refining Co., Cleveland, Ohio	1,392.89	33,785	5,280.23
Norwood Oil Co., Tulsa	8,768.71		10,749.16
F. M. Nelson, New York City	7,988.77		9,846.23
Noble Oil & Gas Co., Tulsa			6,041.00
*G. A. Nichols, Okla. City	4,968.56		8,844.40
*John E. Neely, Tulsa			3,183.87
Nunn Bros., Inc., Tulsa	8,351.15		10,515.12
Nunn Bros., Inc., Tulsa	19,768.15		31,483.64
Walter Neustadt, Ardmore			11,262.37
*R. L. Nelson, Webb City			5,256.54
National Union Oil & Gas Co., Blackwell			12,274.63
National Union Oil & Gas Co., Blackwell			444.21
Number One Oil Co., Tulsa			12,519.55
*Nester Oil Co., Alex	9,473.70		13,548.88
New England Oil & Pipe Line Co., Boston, Mass.			124,336.67
*Mrs. Eva E. Noble, Ardmore	4,212.38		5,243.59
Lloyd Noble, Ardmore			1,597.12
*Hattie E. Noble, Ardmore	3,159.29		3,932.69
Mary Louise Neely, Tulsa			23,940.07
*Alice McNamara, Seminole			2,894.65
Walter Neustadt, Ardmore			8,059.54
*G. A. Nichols, Okla. Ci y	4,937.36		6,592.52
*G. A. Nichols, Okla. City			3,852.83
National Oil & Development Co., Tulsa			9,726.18
*R. L. Nelson, Webb City, Mo.			5,038.63
*Errett R. Newby, Okla. City			3,038.88
W. C. Newman Corporation, Okmulgee			7,198.67
O			
Oil State Petroleum Co., Enid	10,014.34	3,151	14,618.17
*Oil State Petroleum Co., Enid	12,388.45		16,652.38
*H. H. Owen, Norman			2,510.95
Osage Syndicate, Inc., Tulsa			9,392.75
Owl Oil Co., Loco	6,849.67		7,178.41
Osage Oil Syndicate, Tulsa	14,346.31		29,784.14
Osage Oil Syndicate, Tulsa	2,238.22		3,071.10
Osage Gas Prod. Co., Independence, Kans.	282.05	904	81,735.42
*Mary Severs Owen, Muskogee			4,995.10
*J. M. Oneal, Tecumseh	1,346.86		2,023.71
Osage Developmen: Co., Bartlesville	5,194.16		6,423.17
Olean Petroleum Co., Bristow			20,664.44
*S. S. Orwig, Wewoka			6,838.93
*Omega Oil Corp., Shreveport, La.			14,725.27
*Ohio-Mid-Cities Corp., Wichita Falls, Tex.			7,383.50
Ona Oil Co., Blackwell	12,987.87		34,231.06
Robt. Oglesby, Tulsa			5,537.27
*Robt. Oglesby, Tulsa			4,541.77
*Maurice L. O'Brien, Pittsburgh, Pa.			2,758.03
Okla. Natural Gas Corp., Tulsa			48,773.10
*Ohio Fuel Oil Co., Charleston W. Va.			23,851.15
Okla. Gasoline & Oil Co., Tulsa			4,700.75
P			
Producers & Refiners Corp., Denver, Colo.			11,065.00
Producers & Refiners Corp., Denver, Colo.	89,407.03		117,685.33
*J. L. Prescott, New York City			6,339.28
Paragon Oil Co., Tulsa	4,563.75	5,488	6,867.42
Pierce Petroleum Corp., Sand Springs			70,049.66
Papoose Oil Co., Tulsa	9,919.45	10,870	15,749.04
Papoose Oil Co., Tulsa	6,438.97	46,407	39,584.68
Privett Drilling Co., Maramec			5,643.71
*Fred E. Pet it, Los Angeles			3,124.55
Peters Petroleum Corp., Tulsa	51,507.36	38	110,335.50
Pioneer Petroleum Co., Tulsa	16,107.59		19,285.35
*Pioneer Trust Co., trustee for Triple Income Royalty Co., Kansas City, Mo			2,214.67
*Howard W. Phillips, Kansas City Mo.	5,432.11		6,726.51
W. B. Pine, Okmulgee			73,734.17
M. W. Pugh, Marlow	17,047.96		20,685.82
Pawhuska Oil & Gas Co., Pawhuska		45,537	7,104.15
*Lucinda Pitman trust, Muskogee			2,248.83
*Estate, Tom Payne, deceased, Okmulgee			11,258.22
*R. P. Poland, Ardmore	4,881.04		5,891.14
*F. D. Price, Okemah			4,316.72
*Lenora C. Phillips, Bartlesville			2,073.59
*F. F. Priboth, Blackwell	3,952.20		6,165.22
*Lillie M. Pribo T. Blackwell	3,962.60		6,271.28
Geo. L. Pace, Wichita Falls, Tex.	8,886.25		9,995.60
Plains Petroleum Co., Inc., Tulsa	31,168.80	50,983	41,468.54
*Peerless Oil & Gas Co., Indiana, Pa.	33,736.41		43,147.81
Philmack Co., Tulsa			149,341.44
*Philmack Co., Tulsa			5,458.18
Plover Drilling Co., Tulsa	14,539.89		19,040.09
*J. C. Parks, Tulsa			2,144.26
Penrod & Simmons, Okmulgee			5,036.47
Plymouth Petroleum Co., Tulsa	10,828.09		14,100.78
*O. J. Pharaok, Henryetta			8,662.03
Pennok Oil Corp., Tulsa	37,930.96		53,981.11
Peerless Oil Producing Co., Tulsa			3,216.15
*Perpetual Royalty Co., Rock Island, Ill.	1,470.44		2,422.24
*S. T. Palmer, Okemah			9,239.52
Prairie Oil & Gas Co., Independence, Kans.	2,976,605.50		3,966,621.32
Prairie Oil & Gas Co., Independence, Kans.		1,680	128,333.67
Prairie Oil & Gas Trust, Independence, Kans.	4,440.79		6,435.37
Petroleum Investment Co., Fort Worth, Texas	5,578.76		5,754:56
*Provident Royalties Corp., Tulsa			47,396.17
*Providen. Royalties Corp., Tulsa			4,422.18
Paraffine Oil Co., Houston, Texas	9,116.76		11,049.26
Pauline Oil & Gas Co., Oklahoma City	22,671.42		29,586.84
Pure Oil Co., Chicago, Ill.			57,454.67
Pure Oil Co., Chicago, Ill.	2,118,045.40		2,556,978.56
*N. J. and Alpha Price, Okemah			6,348.93
Pawnee Oil Producing Co., Tulsa	4,129.15		5,384.12
Chas. Page Trustee, Tulsa	4,567.87		6,180.75
*M. T. Pierce, Ardmore			6,655.60
*Petroleum Royalties Co., Tulsa			2,599.77
The Petroleum Co. and M. H. Mosier, Tulsa	11,021.22	9,562	14,508.05
The Petroleum Co., Tulsa	5,177.02	9,628	6,968.05
Phillips Oil Co., Chelsea			2,174.68
*Phillips Oil Co., Chelsea			253.54
Phillips & Milam, Chelsea			24,935.82
*Phillips & Milam, Chelsea			130.63
Phillips Petroleum Co., Bartlesville	1,209,017.32		01,694,875.26
Producers Oil Co., Tulsa	7,070.25		10,512.84
Q			
*John Quimby, Montebello, Cal.	8,967.74		14,989.32
Quinton Relief Oil & Gas Co., Quinton			7,779.58
Quinton Spelter Co., Quinton			8,868.80
R			
*Frank H. Reed, Neosho, Mo.			3,241.02
*Frank H. Reed, Neosho, Mo.			67,064.31
*Isabella S. Reed, Neosho, Mo.			66,661.09
*W. E. and Dainty Rogers, Sand Springs			2,459.41
*Replogle & Johnson, Oklahoma Ci.y			13,926.34
*D. Replogle, Oklahoma City			14,492.72
*Jamie Replogle, Oklahoma City			2,410.36
*Joe Ray, Bradley			2,337.99
*Thomas Ryan, Flanagan, Ill.			12,521.32
*Anna Ruzek, Enid			1,974.54
*Ranola Oil Co., Enid			3,534.44
*Ranola Oil Co., Enid	3,312.37		5,896.25
Roxana Petroleum Corp., St. Louis, Mo.	1,023,841.14		1,297,865.09
Roxana Petroleum Corp., St. Louis, Mo.		972,917	39,298.31
Roxana Petroleum Corp. for R. N. Moss, suspense St. Louis Mo.			2,379.48
Roxana for M. Procter, St. Louis, Mo.			9,657.48

Profit or Loss

Trying to go through hard rock with the wrong tools slows up progress and increases costs on the job.

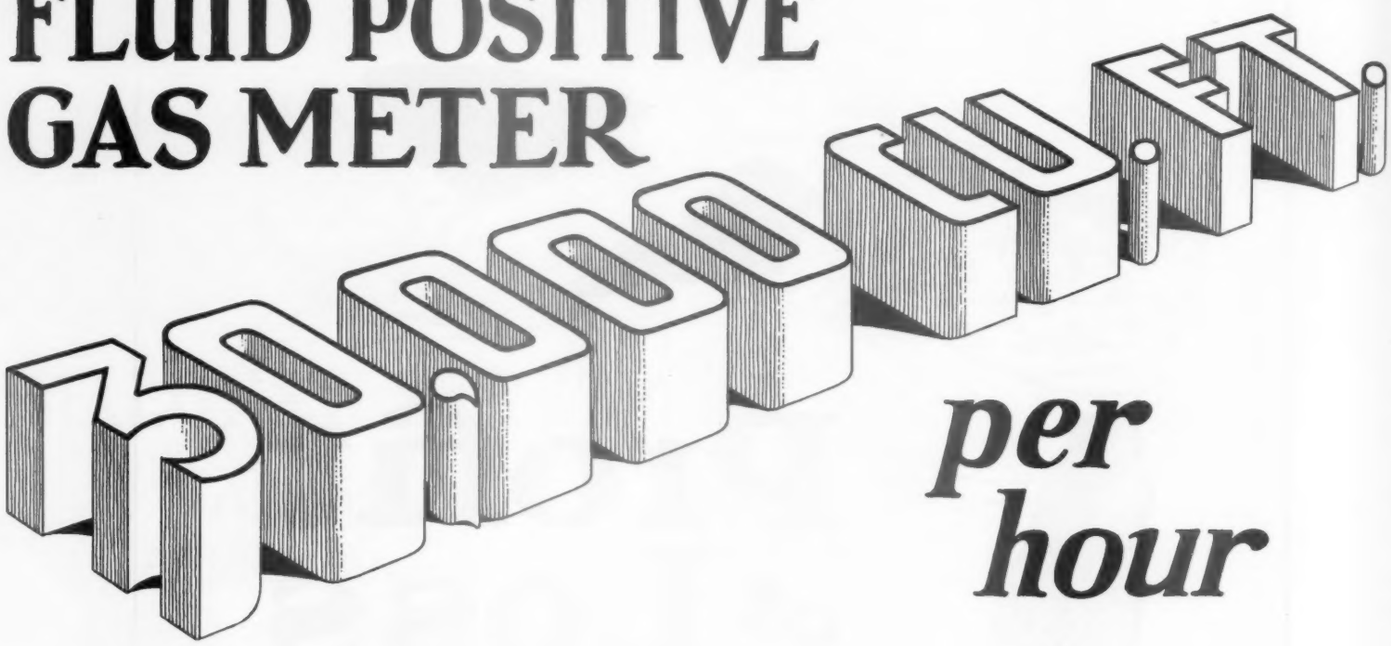
If a fishtail is used when it's rock bit digging—expensive delays and worn out equipment result. Faster drilling through hard rock, less wear and tear on equipment and more time spent with the bit actually at work in the hole are the features that make the Reed Rock Bit a time and money saver for contractors and operators.

Reed Rock Bits

When you hit hard rock, run in a Reed Bit, and go on through.

Reed Roller Bit Company
HOUSTON LOS ANGELES

WESTINGHOUSE FLUID POSITIVE GAS METER



The reputation of the Westinghouse Fluid Positive Gas Meter has been established for many years. Actual service under the most trying conditions is responsible for its universal acceptance as a standard for accuracy and durability wherever either natural or manufactured gas or air is measured.

The meters are now equipped with interior automatic seal overflow, which prevents over-filling, and automatically drains off any condensate, maintaining the seal always at its proper height.

Should the seal increase, due to condensation of gasoline or other liquid, it will overflow the center cup into the inlet and there may be tapped into a tank or other receptacle through the hole.

WESTINGHOUSE
FLUID POSITIVE
GAS METER

BRANCH OFFICES
New York, New York.
Chicago, Illinois.
Dallas, Texas.
Los Angeles, Cal.
Tulsa, Oklahoma.
Seattle, Washington.
Columbia, S. Carolina.
Salt Lake City, Utah.
Kansas City, Missouri.

PITTSBURGH EQUITABLE METER COMPANY

PITTSBURGH, PA.

Name and address—	Oil barrels	Gas M. feet	Cash received
*Robt. M. Rainey, Oklahoma City			2,662.65
C. O. Ross and A. W. Brown, estate, Coffeyville, Kans.	4,017.90		6,388.94
*Dora C. Russell, Duncan			4,301.03
Thos. C. Roberts, Ardmore	18,066.13		24,292.15
Thos. C. Roberts, Ardmore			3,332.03
*Thos. C. Roberts, Ardmore	4,497.18		6,028.58
*J. R. Robinson, Tulsa	6,191.74		7,835.29
W. E. Reardon, Santa Monica, Calif.	2,784.11		3,489.20
*Ray Oil Co., Alex	16,867.00		23,029.39
Red Bank Oil Co., Tulsa			2,102.90
*J. R. Ricks, Tonkawa	37,742.25		72,996.23
J. A. Rockwell, Warren, Pa.	1,661.55		2,327.01
*B. C. Rickets, Ardmore			10,258.33
Geo. D. Roberts, Tulsa	3,925.23		4,745.51
Reliance Oil Co., Houston, Tex.	5,283.44		8,908.89
Reliance Oil Co., Houston, Tex.			9,064.60
Regal Oil & Gas Co., Tulsa	34,430.71	12,001	39,219.64
Rockland Oil Co., Ardmore	9,740.64	2,218	12,920.69
*Riverland Co., Tulsa	31,726.79	10,434	42,724.20
Riverland Co., Tulsa	3,499.02		4,951.10
*Leonard C. Ritts, Tulsa			7,809.47
*Clifton L. Richards, Tulsa			11,776.81
W. S. Randall, Oklahoma City	8,472.97	1,111,185	11,230.90
Ryan Consolidated Petroleum Corp., Bartlesville			34,519.05
W. R. & W. E. Ramsey, Oklahoma City	2,324.27	30,004	4,961.59
Ramsey Oil Co., Caney, Kans.			10,721.67
F. L. Robinson, Gibson & Zahniser Co., Tulsa			5,894.83
*Royalty Investment Synd., New York City			6,457.22
C. E. Roth, Independence, Kans.			12,216.33
*B. B. Ralph, Kansas City, Mo.			9,676.24
E. L. Robinson, Tulsa			4,023.83
*E. L. Robinson, Tulsa			1,669.87
*Sallie E. Robinson, gdn., Muskogee			2,568.57
*Ranola Oil Co., Enid			

S

*Gracie I. Shirley, Tulsa			2,848.71
*Ira Shrimp, Bilworth			7,346.99
*Sun Royalty Co., Tulsa	2,484.27		4,422.18
Sun Royalty Co., Tulsa	19,896.93		26,225.50
*Gracie I. Shirley, Tulsa			3,705.41
*Harriett W. Sparks, Earlsboro			2,297.96
*Harriett W. Sparks, Earlsboro			13,922.71
*Louise B. Stone, Muskogee			5,108.24
*Safety First Oil & Gas Co., Duncan			9,259.71
*J. R. Simpson, Seminole			45,630.60
*O. B. Surber, Chickasha			3,353.55
Sans Bois Gas Co., Quinton			8,989.12
*R. E. Sharum, agent, Ripley			5,021.80
*R. E. Sharum, trustee, Ripley			9,358.09
Speary Bros. and Mills, Marietta, Ohio	4,120.74		5,074.53
Sun Ray Oil Corp., Tulsa	31,460.35		39,604.51
*Clyde and W. Seay, Oscar	2,353.00		2,908.78
*Sarasota Oil Co., Ardmore	4,877.27		5,483.43
*A. O. Simpson, Ardmore	5,573.76		6,773.50
*W. E. Simpson, St. Louis, Mo.	5,573.76		6,773.51
*W. H. Smith, trustee, Ardmore			2,010.42
W. H. Smith, trustee, Ardmore	33,412.07	109	50,054.74
Will H. Smith, Ardmore	1,924.61		2,454.93
Sheridon Oil Co., Tulsa	18,407.17	53	29,108.75
Simpson Fell Oil Co., Ardmore	41,175.04	10,375	50,458.99
*Simpson Fell Oil Co., Ardmore			846.01
Sterling Oil & Gas Co., Abilene, Tex.			22,751.87
X. K. Stout, Tulsa			21,002.35
W. R. Somerville, Muskogee			11,416.25
Savoy Oil Co., Tulsa			39,473.66
Silurian Oil Co., St. Louis, Mo.			102,394.10
Sure Oil Corp., Tulsa	5,011.33		8,305.70
N. T. Gilbert, receiver for Sure Oil Corp., Tulsa	4,658.19		6,411.02
Sinclair Oil & Gas Co., Tulsa	2,560,816.35		3,090,738.00
Sinclair Oil & Gas Co., Tulsa		1,648	68,037.90
*H. F. Sinclair, New York City			9,450.30
Sapulpa Refining Co., Denver, Colo.	26,328.38	18,694	36,273.91
Shaffer Oil & Refining Co., Tulsa			530,868.00
Selby Oil & Gas Co., Tulsa			55,604.01
*Selby Oil & Gas Co., Tulsa			3,595.35
*Seminole Oil Co., Tulsa			96,690.83
Skelly Oil Co., Tulsa			725,543.33
Skelly Oil Co., Tulsa			41,569.00
*Skelly Oil Co., Tulsa			3,809.71
W. G. Skelly, Tulsa	4,388.50		5,129.32
*W. G. Skelly, Tulsa			830.97
Schermerhorn Oil Co., Tulsa	5,250.38	48,663	9,770.78
J. B. Schermerhorn, Inc., Minneapolis, Minn.	84,921.54		103,676.57
*J. B. Schermerhorn, Inc., Minneapolis, Minn.	3,125.92		3,725.92
Schermerhorn-Young Co., Minneapolis, Minn.			3,670.74
Schermerhorn-Ardmore Co., Minneapolis, Minn.			70,412.33
*M. R. Stone, trustee, Hawarden, Iowa	3,697.87		4,055.11
*J. K. D. Shaffer, Oklahoma City	2,774.44		3,904.15
*F. A. Shellenberger, Marietta			2,398.40
*Terry G. Smith, San Diego, Calif.			14,751.71
*Carl D. Smith, Ngra.	1,837.03		2,161.57
S. W. Pipe Line Co., Bristow		69,029	5,522.36
S. W. Production Co., Bristow		113,937	9,115.04
*C. E. Sykes, Ardmore			3,650.57
*O. W. Seay, Ryan			14,726.45
*R. E. Snell, Jr., Dustin			3,773.69
Steyner Oil Co., Bartlesville	10,869.33		13,375.29
Standish Oil Co., Bartlesville	2,825.51		3,437.78
Shutzer Bros., Dewey	3,910.25		4,720.37
*G. A. Simon, Tulsa	2,134.87		2,977.02
*Arlie Strough et al, Davenport			3,519.63
*L. O. Shannon, Stillwater			2,777.70
R. S. Shade, Tulsa	69,187.21		91,467.97
*Paul Schroeder, Enid			4,013.01
*Oscar Schroeder, Enid			4,013.01
*Walter Schroeder, Enid			4,013.01
*Caroline Schroeder, Enid			4,013.01
*Henry Schroeder, Enid			4,013.01
*Howard S. Splane, Tulsa			2,953.70
O. S. Sparks, Ardmore			3,156.11
*L. O. Sparks, Oklahoma City			28,875.09
Sinclair Crude Oil Purchasing Co., Tulsa	67,131.45		119,134.24
*Dr. N. Sulzberger, New York City			4,892.33
*Dave Schonwald, Blackwell			4,420.10
*G. J. Smith, Tulsa			19,823.38
*G. J. Smith, Tulsa			16,351.00
*John Smith, Wetumka	1,790.20		2,403.04
Robert C. Sharp, Tulsa	11,661.12		16,370.55
*Robert C. Sharp, Tulsa			2,703.46
Superior Oil Corp., Lexington, Ky.	371,139.73	163,919	503,983.31
I. S. Simons, Tulsa			8,667.99
*Amanda Schumacher, Orange, Cal.			4,032.97
*Waddie Sewell, Kellyville			2,183.26
M. T. Smith & Son, Ardmore			10,059.38
*Peter Sukovaty, Bristow			2,528.58
*Anna Sukovaty, Bristow			2,528.58
*M. F. Stell, Tulsa			3,225.42
*Edward Sandford, Oklahoma City			2,804.30
*Mrs. Mattie Maud Smith, Claypool, Okla.			2,263.03
*Bettie Simon, Oklahoma City			2,070.68
*W. F. Scott, Long Beach, Cal.			2,560.58
*J. M. Shelton, Duncan			2,049.44
Snowden & McSweeney Co., New York City			20,480.60
Simms Oil Co., Dallas, Texas	29,019.24		38,295.61
*E. D. Slough, trustee, Ardmore			3,877.04
J. A. Swindler & Son, Muskogee	16,175.95		20,839.02
Estate of L. S. Skelton, Okmulgee	1,932.40		6,629.63
*Ira S. Shrimp, Dilworth			6,528.67
T. K. Smith, Tulsa	2,843.83		5,017.68
*Charles A. Snyder, Sapulpa			3,485.07
*P. H. Stein, Muskogee			3,260.67
*Morris Schonwald, Tonkawa			7,646.12
*Ida Seehaver, Oklahoma City			5,048.42
South Ben Oil Corp., Tulsa			23,085.19
Skelton Moore Oil Co., Bartlesville	7,084.37		8,888.68
*Leona Smith, Blackwell			4,795.31
*Steve Smith, Blackwell			4,795.31
*R. Earl Smith, Blackwell			4,795.31

Name and address—	Oil barrels	Gas M. feet	Cash received
*Lucy Scott, Wewoka			2,961.89
T. B. Slick, Clarion, Pa.	381,592.34	881,486	561,225.39
*T. B. Slick, Clarion, Pa.	37,486.09	109,361	56,176.18
T. B. Slick, Inc., Oklahoma City	573,937.31	955,376	797,036.81
*T. B. Slick, Inc., Oklahoma City	38,565.81	135	53,225.42
Slick Oil Co., Tulsa	2,073.49		2,736.95

T

Troy Oil & Gas Co., Sapulpa	3,689.62		4,423.69
Tiger Mountain Oil Co., Tulsa			10,045.00
Tiger Petroleum Corp., Tulsa	7,008.17	670,643	9,271.72
H. H. Taylor, Tulsa			87,389.27
Turman Oil Co., Tulsa	6,260.17		7,110.96
N. T. Gilbert and Joseph Glass for Turman Oil Co.	541,204.29	65,517	719,801.57
Tidal Osage Oil Co., Tulsa	1,052,321.92		1,400,452.40
*Tidal Osage Oil Co., Tulsa			185.72
Tildal Oil Co., Tulsa	345,358.50		433,031.09
*Tidal Oil Co., Tulsa			14,298.87
*Twin State Oil Co., Tulsa	8,211.22		11,211.18
*Twin State Oil Co., Tulsa			146.49
Twin State Oil Co., Tulsa	371,988.74		413,510.27
Transcontinental Oil Co., Tulsa	188,393.43		246,915.79
Transcontinental Oil Co., Tulsa		195	9,722.18
Texas Company, Tulsa	1,104,561.05		1,462,281.59
Texas Company, Tulsa			89,203.40
*Texas Company, Tulsa	23,428.97		34,850.25
Texas Pacific Coal & Oil Co., Thurber, Texas	49,857.61	5,854	55,051.60
Texas Drilling Syndicate No. 3, Duncan			5,410.82
*D. C. Te er, Duncan			2,680.71
*A. M. Thomas, Tonkawa			4,404.53
*Maybell Thompson, Blackwell			2,007.40
*S. F. Thompson, Okemah			6,054.43
Thompson Oil & Gas, Tulsa	4,749.67		6,251.19
*Roy B. Thompson, Tulsa			7,047.04
*Roy B. Thompson, Tulsa			8,904.06
*W. M. Thompson, Tulsa			9,231.46
*J. N. Thompson, Tulsa	1,575.71		2,150.23
Tidal Oil Co., Tulsa			31,297.82
*Tidal Oil Co., Tulsa			697.67
*K. B. Turner, Eufaula			1,997.36
*Vida M. Tull, Yale			9,039.80
*Transcontinental Royalty Co., Tonkawa			3,846.75
The Tulsa Co., Oklahoma City			8,527.59
*F. E. Tucker, Ardmore			3,305.16
Thlocco Oil Co., Tulsa			18,909.49
Indiana Oil & Gas Co., Tulsa	28,114.70	23	35,467.13
*David P. Thornton, Muskogee	2,414.27		3,315.60
J. C. Trigg, receiver, Oklahoma City			22,075.41
*John E. Turner, Holdenville			2,492.02
*J. L. Townsend, Okmulgee			4,345.69
*Melbon Thompson, Cushing	1,234.18		2,043.99
Melbon Thompson, Cushing			56.47
Tootle-Lacy National Bank, St. Joseph, Mo.			5,163.76
*Transcontinental Oil Co., Tulsa (held under litigation)			3,964.49
*C. F. Turner, Shawnee			14,163.33

U

Union Oil & Mining Co., Tulsa			8,373.63
*J. B. Umpleby, Oklahoma City			3,920.41
*United Royalty Co., Newkirk			2,247.60
United Eight Oil Trust, George W. Bilbo, trustee, Madill	18,777.13		30,945.17
W. L. Umburn, Weleetka			16,619.14
W. L. Umburn, Weleetka			686.84

V

Valley Osage Oil Co., Tulsa	22,429.81		28,009.48
*Sam K. Viersen, Okmulgee	9,784.28		13,791.00
Viersen Oil & Gas Co., Okmulgee	2,555.58		3,673.78
*A. A. Viersen, Okmulgee			1,765.44
*Viersen Oil & Gas Co., Okmulgee			282.75
*Fronia Van Buskirk, Los Angeles, Calif.			4,609.91
*Leon G. Voorhees, Ardmore			28,154.77
Vernon Oil & Gas Co., Blackwell			27,589.60
*Amanda Vassar, Tulsa			8,355.13
*S. E. Vance, Tulsa			5,197.19
*W. P. Varnum, Seminole			17,659.26
*Amanda Vassar, Tulsa			3,980.86
Vowell-Jackson, Sapulpa	5,667.52	4,205	8,519.35
*L. B. Jackson, Sapulpa	5,472.00		7,344.37

W

*C. W. Walcott, guardian, Coweta			4,849.66
Warner-Caldwell Oil Co., Titusville, Pa.	22,671.85		29,778.84
*Winnie Gardenhire Washburn, Ardmore			2,411.22
Wolverine Petroleum Corp., St. Louis, Mo.	213,956.94		248,377.34
Wolverine Petroleum Corp., St. Louis, Mo.		355,670	15,611.76
*Wolverine Petroleum Corp., St. Louis, Mo.			50.16
L. H. Wentz Oil Div., Ponca City	328,521.49	601,479	470,478.48
Westerly Oil Co., Bartlesville	4,318.28		5,878.21
E. A. Walker, Oklahoma City	27,502.25	19,504	35,432.41
*May M. Walker, Oklahoma City	1,072.46	340,719	1,482.12
*Henry C. Walker, Los Angeles, Calif.			3,384.34
Winona Oil Co. of Delaware, Tulsa			69,928.03
*E. W. Whitney, Wewoka			36,048.89
Western Oil Corp., Tulsa	191,804.59	116,443	262,573.53
*Western Oil Corp., Tulsa			102.02
*Archie Wright, Muskogee			1,988.44
*J. L. Welsh, Blackwell			3,895.96
*Ruth Welsh, Blackwell			3,540.37
Westheimer & Daube, Ardmore	124,244.72	83,760	158,690.23
*Westheimer & Daube, Ardmore	18,498.83		22,385.47
*Elmer T. and Edward E. Wagner, Cement			2,045.50
White Eagle Oil & Refining Co., Wichita, Kans.	7,834.22		13,226.25
Wise & Jackson, Sapulpa			5,045.53
*Louis H. Walker, Santa Ana, Cal.			3,382.13
Westervelt & Noble Oil & Gas, Oklahoma City		84	8,467.31
*W. Y. Dilley trustee, Waurika	8,192.89		8,713.13
*Wolfe Oil Corp., Bristow			7,950.84
*W. W. Woodworth, Ringling			2,756.95
Washington Grayson and Hill Moore, Severs Estate, trustee, Okemah			2,315.44
Washington Grayson and Hill Moore for Yarhola Estate, Okemah			2,251.40
*Benton Wilson, Greenfield, Mo.			6,509.78
*Benton Wilson, Greenfield, Mo.			10,013.63
*Ethel E. Watson, Oklahoma City			7,066.52
Wood Oil Co., Tulsa			61,673.36
Wigton & Long Co., Okmulgee			5,936.74
Wigton & Long Co., Okmulgee			2,296.33
*Wigton & Long Co., Okmulgee			343.19
Wigton & Long Co., Okmulgee			6,652.89
Wigton & Long Co., Okmulgee			4,688.96
Wigton & Long Co., Okmulgee			91.78
Wigton & Long Co., Okmulgee			2,099.66
Wigton & Long Co., Okmulgee			3,109.02
Watchorn Oil & Gas Co., Oklahoma City	48,501.55		64,022.04
*Washington Royalties Co., Bartlesville	4,976.90		6,972.16
Wah-Shah-She Oil Co., Bartlesville	3,972.71		5,162.83
Western Oil Corp., Tulsa	4,839.78		5,997.98
*C. D. Williams, Ardmore			2,628.41
H. F. Wilcox Oil & Gas Co., Tulsa	283,668.07		377,150.38
*H. F. Wilcox, Tulsa	2,635.74		3,373.23
*James Wright, Bristow			7,462.83
Whitten & Wilcox, Tulsa			24,435.30
*Roy Wood, Oklahoma City	4,968.56		8,844.40
Wilson Petroleum Corp., Tulsa	15,147.00	11,997	12,038.00
A. L. Welsh, Oklahoma City			5,207.93
J. H. Wright, Sapulpa			51,454.48
Wiser Oil Co., Bartlesville	69,599.22	6,885	85,199.71
Ward Oil & Gas Co., Tulsa			6,651.56
Walsh Oil Co., Tulsa	6,869.57		7,853.13
*C. C. Walker, Okemah			9,593.70
Winkler & McQueen, Inc., Duncan			17,621.04
L. W. Winkler, Duncan			2,780.25
Willmer Oil & Gas Properties, Pittsburgh, Pa.	7,084.41		9,932.87
*Emma Weaver, Oklahoma City			2,149.68
*Roy Wood, Oklahoma City			14,771.06
*Roy Wood, Oklahoma City			3,852.83

Y

*J. B. Yount, Tonkawa			3,579.34
*York Oil & Gas Co., Muskogee	5,047.34		8,593.00

Z

Zola Oil Co., Tulsa	17,005.80		20,084.71

Sucker Rod Price Announcement

Axelson Machine Company

Having added many mechanical operations as well as further heat treatment features, substantially raising their ever superior standard, we are forced to advance the price slightly.

Complete information with fullest details upon request.

Axelson Machine Company
P. O. Box 337, Los Angeles. Tulsa, St. Louis, New York City
Mid-Continent Distributors—Frick-Reid Supply Co.
Eastern Distributors—Frick & Lindsay Co.

CRU

West
more th
having
July 1
Practice
County.
Upton
Comp
proport
ing sho
age co
increas
part to
Church
Next
much l
engaged
as men
umns.
The
fie'ds i
as com
total o
amount
Crane
margin
Reagan
bbls. a

Co
Gulf P.
Humble
Humble
Magnol
Mi
Eastern
Eastlan
Eastlan
Eastlan
Landre
Pecos
Pecos
Pecos
Simms
Southe
Southe

Mi

Humbl
Kay C
Kay C

Phil-T

Gulf P
Gulf P

Magno

Illinois

Big La
Big La
Big La
Humbl
Humbl
Reaga
Texon
Marlan

Humbl
Marlan
Marlan
Mid-K
Texas
Texas
Southe
Southe

Gulf P
Southe
Southe
Southe
Southe

Gu

TOTA
Allsm
Ameri
Atlan
Big L
M. D.
Churc
Churc
Comet
Cosde
Crom
Crom
Dixie
Eastl
Gulf
Godle
Humb
Indep
J. K.
Landr
Magn
Lockl
Marla
McMa
Merri
Mid-
Mid-
Prair
Phill
Pure
Repu
Reev
Roxa
Sun
Simm
Simm

CRUDE OIL STOCKS IN WEST TEXAS SHOW INCREASE OF 1,000,000 BBLS.

West Texas stocks of crude increased more than 1,000,000 bbls. during July, having grown from 3,721,735 bbls. on July 1 to 4,792,554 bbls. on August 1. Practically all of this increase is in Crane County, with a little gain shown in the Upton County figures.

Completed steel tankage registered a proportional gain, the June figures having shown 6,080,921 bbls. of steel storage constructed, while this amount had increased to 7,921,739 bbls., due in large part to the rapid building of tanks in the Church-Fields Pool of Crane County. Next month's figures will probably be much larger, as many companies are now engaged in large tank building programs, as mentioned several times in these columns.

The total production of all West Texas fields increased 652,529 bbls. during July as compared with the June figures. The total output of 13 counties in this district amounted to 4,140,084 bbls. in July. Crane County led all others by a wide margin, having produced 2,332,746 bbls. Reagan County was second with 612,644 bbls. and Upton third with 574,124 bbls. Pecos County, in spite of severe pinching in of wells in the Yates Pool, climbed into fourth place with a total output of 165,300 bbls.

Among the producing companies it is interesting to note that Gulf Production Co. assumed the leadership, having overtaken and passed the Big Lake Oil Co for the first time. Gulf produced 613,206 bbls. during July, while Big Lake Oil Co. dropped off a little to 521,782 bbls. This is the first time in the history of West Texas that any company has produced more oil than the Big Lake Oil Co. Simms Oil Co. and Atlantic Oil Producing Co. taken together, almost equaled the Big Lake Production this month, having produced 521,303 bbls. Third place in West Texas producers ranks really belongs to Eastland Oil Co. and Collett, however, as this company's 80 acres in the Church-Fields Pool produced 328,946 bbls. during July. Humble Oil & Refining Co. had big production, also, with a total of 231,555 bbls., and Tidal Oil Co., Turman & Maxwell produced 225,493 bbls. Landreth Production Corp.'s strip in Crane County flowed 170,881 bbls. during the month.

STEEL STORAGE REPORT FOR WEST TEXAS
JULY, 1927

Company and farm—	Tanks No.	Tanks Size	Capacity	Stock	Room
CRANE COUNTY					
Gulf P. L. Co., McElroy	2	80	160,000	24,332	135,668
Humble P. L. Co., University	6	55	330,000	197,274	132,726
Humble, University	2	64	128,000	67,430	60,570
Magnolia, University	3	55	165,000	107,704	57,296
Miscellaneous tanks and storage:					
Eastern Oil, University	1	64	229,000	.....	.....
Eastland Oil, University	2	55			
Eastland Oil, University	5	10			
Eastland Oil, University	1	5			
Landreth Prod., State	8	55	440,000	.....	.....
Pecos Oil Co., University	1	55	192,500	.....	.....
Pecos Oil Co., University	1	37.5			
Pecos Oil Co., University	10	10			
Simms and Atlantic, University	4	55	220,000	.....	.....
Southern P. L. Co., University	1	25	45,000	.....	.....
Southern P. L. Co., University	2	10			
Miscellaneous storage			1,126,500	636,393	
CROCKETT COUNTY					
Humble P. L. Co., Powell	1	55	53,739	35,877	17,862
Kay County Gas, Powell	2	5	10,000	3,320	6,680
HOWARD COUNTY					
Kay County Gas, Coahoma	2	10	20,000	15,025	4,975
JONES COUNTY					
Phil-Tex, Noodle Creek	1	55	53,000	20,997	32,003
MIDLAND COUNTY					
Gulf P. L. Co., fee	4	55	700,000	526,299	170,701
Gulf P. L. Co., fee	6	80			
MITCHELL COUNTY					
Magnolia, Iatan	5	55	275,000	218,077	56,923
PECOS COUNTY					
Illinois P. L., Yates	4	55	220,000	158,215	61,784
REAGAN COUNTY					
Big Lake O. Co., University	12	55	692,000	394,839	296,161
Big Lake O. Co., University	12	1			
Big Lake O. Co., University	2	10			
Humble P. L. Co., Kemper	5	64	320,000	151,383	168,617
Humble P. L. Co., Leased	8	80	640,000	590,344	49,656
Reagan P. L. Co., Kemper	6	80	480,000	294,370	185,630
Texon O. & L., University	9	55	495,000	No stock	495,000
Marland P. L. Co., Leased	2	80	160,000	78,171	81,829
UPTON COUNTY					
Humble P. L. Co., Burleson	13	55	715,000	568,347	146,653
Marland P. L. Co., Burleson	4	80	540,000	526,302	13,698
Marland, Burleson	4	55			
Mid-Kansas, Union Land	1	55	55,000	.....	55,000
Texas P. L. Co., Union Land	1	37.5	101,500	4,577	96,923
Texas P. L. Co., Crossett	1	64			
Southern P. L., Burleson	1	64	170,000	88,545	86,455
Southern P. L., Leased	Returned to Atlantic storage				
WARD AND WINKLER COUNTIES					
Gulf Prod. Co., Hendricks	2	80	160,000	.....	160,000
Southern P. L., Hendricks	2	55	160,000	84,733	75,267
Southern P. L., Hendricks	2	10			
Southern P. L., Hendricks	1	25			
Southern P. L., Hendricks	1	5			
Grand total			7,921,739	4,792,554	

TOTAL PRODUCTION BY COMPANIES

Allaman & Bell	5,197
Amerada Petroleum Corp.	11,272
Atlantic P. Pr. Co.	7,178
Big Lake Oil Co.	521,782
M. D. Bryant	2,203
Church & Fields	4,421
Church & Weekley	42,489
Comet Petroleum Co.	300
Cosden, J. S., Inc.	620
Cromwell, Carl	3,820
Cromwell, Carl, et al	137,050
Dixie Oil Co.	96,702
Eastland Oil Co.	328,946
Gulf Prod. Co.	613,206
Godley O. & G. Co.	1,944
Humble O. & R. Co.	231,555
Independent O. & G. Co.	87,524
J. K. Hughes Dev. Co.	8,220
Landreth Prod. Corp.	170,881
Magnolia Pet. Co.	100,092
Lockhart Brothers	6,670
Marland Oil Co.	175,057
McMan O. & G. Co.	4,300
Merrick & Bristow	3,365
Mid-Kansas O. & G. Co.	127,461
Mid-West Exploration Co.	8,762
Prairie O. & G. Co.	86,376
Phillips Petroleum Co.	31,134
Pure Oil Co.	12,009
Republic Prod. Co.	8,879
Reeves & Apperman	4,960
Roxana Petroleum Corp.	92, 54
Sun Oil Co.	8,416
Simms & Atlantic	521,303
Simms Oil Co.	3,243
Steadham & Thrasher	326
Snowden & McSweeney	5,527
Southern Crude O. P. Co.	35,511
Texas Pacific C. & O. Co.	90,246
Texon O. & L. Co.	198,412
The California Co.	93,050
The Texas Company	37,600
Tidal Oil Co.	225,493
Wentz Oil Corp.	3,463
White Eagle O. & R. Co.	352
Williams, P. H.	12,405

TOTAL PRODUCTION BY FIELDS

Big Lake Field, Reagan County	718,769
Chalk Pool, Howard County	108,192
Church & Fields, Crane County	1,779,978
Connell Field, Ector County	620
Hendricks Field, Winkler County	50,620
McCamey-Taylor, Crane and Upton	702,603
McElroy Field, Crane County	422,289
Noodle Creek, Jones County	51,281
Powell Field, Crockett County	44,230
Settles Field, Glasscock County	1,023
Westbrook & Iatan, Mitchell County	118,276
Wheat Field, Loving County	1,023
Yates Field, Pecos County	141,180
Grand total, July	4,140,084
Grand total, June	3,487,555
Increase	652,529

PIPE LINE RUNS BY COUNTIES

Crane County	2,332,746
Crockett County	43,552
Ector County	
Glasscock County	
Howard County	109,864
Jones County	51,171
Loving County	1,023
Mitchell County	102,373
Pecos County	165,300
Reagan County	612,644
Scurry County	
Upton County	572,124
Winkler County	46,480
Grand total	3,934,724
Increase	748,923

PIPE LINE RUNS BY COMPANIES

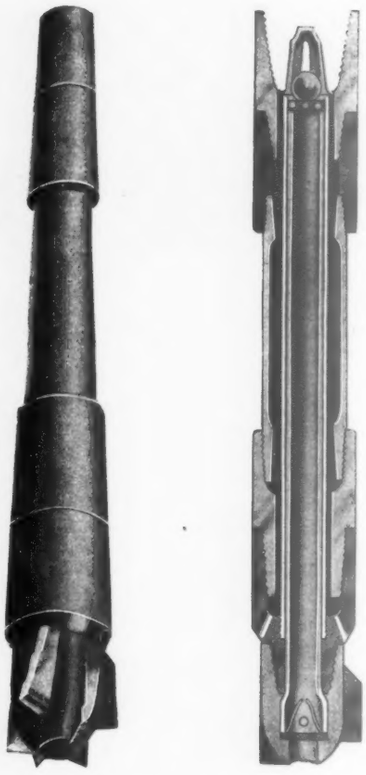
Col-Tex Refining Co.	126,716
Gulf Pipe Line Co.	497,680
Humble Pipe Line Co.	1,076,595
Humble Pipe Line Co. (tank cars)	269,140
Humble Pipe Line Co. (delivered to refinery)	343,982
Illinois Pipe Line Co.	165,300
Marland Pipe Line Co.	177,269
Phil-Tex Pipe Line Co.	51,171
Reagan County Pur. Co.	612,644
Reagan County Pur. Co. (tank cars)	31,000
Roxana Pipe Line Co. (tank cars)	95,956
Southern Pipe Line Co.	460,713

PRODUCTION AND PIPE LINE RUNS FOR WEST TEXAS, JULY, 1927

Company, Lease, Well No.—	Days Prod.	Total Prod.	P. L. Runs	REMARKS
CRANE COUNTY—				
Church & Fields, University 1	18	1,775	3,550	H. P. L.
Church & Fields, Duoil-University 1	18	2,646	5,049	H. P. L.
Church & Weekley, University 1, 2, 3	31	42,489	54,854	H. P. L.
Cromwell et al, University 1, 4, 5, 6, 7, 11, 12	31	137,050	71,531	H. P. L.
East Oil Co. & Collett, Univ. 1, 2, 4, 5, 7, 8	31	323,981	297,952	H. P. L.
Gulf Prod., Crier-McElroy 1 to 6	31	52,641	52,547	G. P. L.
Gulf Prod. Co., Crier-McElroy-A, 1 to 4	31	47,306	47,110	G. P. L.
Gulf Prod. Co., J. T. McElroy, 1 to 9	31	319,167	318,797	G. P. L.
Gulf Prod. Co., J. T. McElroy-B, 1	31	3,125	3,081	G. P. L.
Gulf Prod. Co., State-Lasseter 1 to 7	31	76,345	76,145	G. P. L.
Gulf Prod. Co. total		498,634	497,680	
Humble O. & R. Co., University 1 to 9	31	198,400	183,498	H. P. L.
Independent O. & G. Co., Bryant-Moore 1	27	267	214	So. P. L.
Independent, University-A 1, 2	31	43,912	25,787	So. P. L.
Independent, University-B 1	23	9,875	8,280	So. P. L.
Independent O. & G. total		54,054	34,281	
Landreth Prod. Corp., State-Cowden-Anderson 1, 2, 3, 5, 6, 7, 8	31	170,881	6,709	So. P. L.
McMan Oil & Gas Co., Hughes 1, 2	31	3,106	3,008	Mar. P. L.
Magnolia Pet. Co., University 1, 2, 3, 4	30	3,370	3,370	Storage
Magnolia Pet. Co., Univ.-Hardwicke 1	31	33,647	33,647	Storage
Magnolia Pet. Co., Univ.-O'Keefe 1 to 5	31	8,454	8,454	Storage
Magnolia Pet. Co., Univ.-Lasseter 1, 2	27	2,097	2,097	Storage
Magnolia Pet. Co. total		47,870	47,870	Storage
Marland Oil Co., Cowden-A, 1, 2, 3	31	1,626		
Marland Oil Co., Cowden-B 1	31	3,084		
Marland Oil Co., Durham 2	30	280		
Marland Oil Co., Hughes-C 1, 2, 3	31	1,399		
Marland Oil Co., Hughes-D 1 to 6	31	22,570		
Marland Oil Co., Hughes-Gibbs 1, 2	31	841		
Marland Oil Co., Zoch-Hughes-Keith, 1, 2, 3	31	5,793		
Marland Oil Co., Gibbs 2	31	5,270		
Marland Oil Co., Shirley 1 to 4	31	9,463		
Marland Oil Co., Shirley-A 1	29	405		
Marland Oil Co. total		50,761	48,680	Mar. P. L.
Prairie O. & G. Co., University-A 1 to 6	31	8,875	8,343	H. P. L.
Prairie O. & G. Co., Univ.-Lasseter 1, 2	31	40,623	38,787	H. P. L.
Prairie O. & G. Co., total		49,498	47,130	
Simms & Atlantic, University-A 1 to 7	31	224,764	153,259	H. P. L.
Simms & Atlantic, University-B 1	31	2,058	2,026	H. P. L.
Simms & Atlantic, University-C 1 to 4	31	256,134	170,015	H. P. L.
Simms & Atlantic, University-D 1, 2	31	31,918	31,303	H. P. L.
Simms & Atlantic, University-E 1	13	6,429	5,415	H. P. L.
Simms & Atlantic total		521,303	362,018	
Stidham & Thrasher, University 1	31	326	399	H. P. L.
Tidal Oil Co. and Turman & Maxwell, University-B 1, 2	29	2,500	2,061	So. P. L.
Tidal Oil Co. and Turman & Maxwell, University-C 1	28	1,099	1,099	Mag. P. L.
Tidal Oil Co. and Turman & Maxwell, University-E 1	29	2,821	3,008	So. P. L.
Tidal Oil Co. and Turman & Maxwell, University-F 1, 2, 3, 4, 5, 6	31	198,672	195,050	So. P. L.
Tidal Oil Co. and Turman & Maxwell, University-H 1	18	620	.....	
Tidal Oil Co. and Turman & Maxwell, University-H 2	30	1,060	1,355	So. P. L.
Tidal Oil Co. and Turman & Maxwell, University-I 1	30	14,352	1,120	
Total		221,124		
The Texas Company, University 1	31	9,174	8,760	So. P. L.
Grand Total Crane County			2,332,746	
Crane County increase, 763,858.				
CROCKETT COUNTY—				
Carl Cromwell, Powell 1, 2, 3, 5	31	3,820	3,750	Mar. P. L.
Gulf Production Co., Powell-A 1, 2, 3, 4, 5, (No. 1 plugged)	31	1,187	1,170	H. P. L.
Gulf Production Co., Powell-D 1	31	2,072	2,026	H. P. L.
Gulf Production Co., total		3,259	3,196	
J. K. Hughes Dev. Co., Powell-A 1, 2, 3	31	7,630	7,506	H. P. L.
J. K. Hughes Dev. Co., Powell-B 1	31	590	540	H. P. L.
J. K. Hughes Dev. Co., total		8,220	8,046	
Humble and Marland, Powell 1 to 10	31	8,587	4,670	Mar. P. L.
			4,330	H. P. L.
Humble and Marland, Powell-B 1	31	744	537	H. P. L.
			573	Mar. P. L.
Humble and Marland, total		9,331	10,110	
Humble Oil & Refining Co., Sarg 1	31	186	220	H. P. L.
Republic Production Co., Powell 1, 2	31	6,544	5,125	H. P. L.
Roxana Petroleum Corp., Powell 1	31	465	450	Mar. P. L.
Williams, P. H., Powell 1	26	12,405	12,655	H. P. L.
Grand Total Crockett County		44,230	43,552	
ECTOR COUNTY—				
J. S. Cosden, Inc., Connell-A 1, 2	31	620	620	Farm str.
GLASSCOCK COUNTY—				
Texon and Marland, Settles 1	31	1,023	1,023	Farm str.
HOWARD COUNTY—				
Comet Petroleum Co., Clay 1	30	300	300	Fuel
Dixie Oil Co., Clay 1	5	174	174	Farm str.
F. H. E. Oil Co., Roberts 1	25	1,500	1,500	Fuel
Gulf Production Co., Chalk 2, 3	31	620	620	Mag. P. L.
Godley Oil Co., Hooks 1	21	1,944	1,944	Farm str.
Magnolia Petroleum Co., G. O. Chalk 1, 2, 3, 4, 6, 7	31	6,524	6,524	Iatan tank farm
Magnolia, Owen Chalk 1, 2, 3, 4, 6, 7, 8	31	7,201	7,201	Iatan tank farm
Magnolia, Mary Chalk 1, 2, 3, 4, 5	31	9,377	9,377	Iatan tank farm
Magnolia, Kelley Chalk 1, 3, 4	31	5,009	5,009	Iatan tank farm
Magnolia, Sloan Chalk 1, 4	31	1,989	1,989	Iatan tank farm
Magnolia, Sloan Chalk 2, 3	6	293	293	Iatan tank farm
Magnolia, Hyman Chalk 1, 2	31	775	775	Iatan tank farm
Magnolia, Sarah Hyman 1, 2	30	1,123	1,123	Iatan tank farm
Magnolia Petroleum Co., total		32,291	32,291	Iatan tank farm
Humble Oil & Refining, Douthitt 1, 2	31	1,085	1,085	Mag. P. L.
Lockhart & Co., Chalk 1, 2, 3	31	2,481	.....	
Lockhart & Co., Chalk-A 1, 2, 3	31	2,949	.....	
Lockhart & Co., Scott-Hyman 1	31	191	.....	
Lockhart & Co., total		5,621	6,510	Rio Grande Ref.
Marland Oil Co., Clay 1, 2, 3, 4, 5	31	9,716		
Marland Oil Co., Clay-A 1, 2, 3, 4, 5	31	8,481		
Marland Oil Co., Clay-B 1	31	732		
Marland Oil Co., Chalk 1 to 11	31	7,958		
Marland Oil Co., Chalk-A 1 to 8	31	7,295		
Marland Oil Co., Chalk-B 1	31	1,580		
Marland Oil Co., Chalk-C 1	24	460		
Marland Oil Co., Chalk-D 1	31	1,217		

THE PERFECTION CORE BARREL

A Dependable Coring Tool



The Perfection Core Barrel is always efficient, always reliable for coring all kinds of formation.

Examine its design and construction from every angle—note the split liner method of removing core from barrel.

Consider the cutting efficiency on six cutting blades over four blades and the fact that every part of the Perfection Core Barrel is scientifically heat treated —then you'll realize why the Perfection Core Barrel is the most dependable coring tool money can buy.

Five sizes of barrels.
Cutter heads 4¼" to 14".

Write for pamphlet and prices.

See the Perfection Core Barrel at the Tulsa International Petroleum Exposition.

Manufactured by

OIL CITY IRON WORKS, INC.
SHREVEPORT, LOUISIANA

DISTRIBUTORS:
Wilson Supply Co., Houston, Texas
Bradford Supply Co., Wichita Falls, Texas
Hercules Supply Co., Dallas, Texas

Company, Lease, Well No.	Days Prod.	Total Prod.	P. L. Runs	REMARKS
Marland Oil Co., Chalk-E 1	31	4,496		
Marland Oil Co., total		37,135	12,098	Mar. P. L.
Marland and Texon, Harding 1	13	399	399	Farm str.
Merrick & Bristow, Hooks 1, 2, 3	31	3,365	*3,365	
Midwest Expltn. Co., Clay 1	31	566		
Midwest Expltn. Co., Clay 2	18	504		
Midwest Expltn. Co., total		1,070	1,070	Farm str.
Pure Oil Co., Chalk 1, 2, 3	31	12,300	*12,009	
Reeves & Apperman, Clay 1, 2	31	4,960	4,960	Farm str.
Tidal Oil Co., Chalk 1, 2	31	1,354	1,534	Mag. P. L.
Howard County, total		108,192	109,684	
*Run through Marland pipe line.				
JONES COUNTY—				
Atlantic O. P. Co., Howell 1				
Marland Oil Co., Mason 1, 2, 3	31	12,455	12,342	No production
Midwest Expltn. Co., Thornton 1, 2, 3, 4	31	7,692	7,684	Phill-Tex.
Phillips Petroleum Co., Beasley 1	31	2,585	2,583	Phill-Tex.
Phillips Petroleum Co., Mason 1	31	4,811	4,803	Phill-Tex.
Phillips Petroleum Co., Tessie 1, 2, 3	31	10,821	10,816	Phill-Tex.
Phillips Petroleum Co., Winters 1, 2, 4	31	9,043	9,075	Phill-Tex.
Phillips Petroleum Co., Vestal 1	31	3,864	3,868	Phill-Tex.
Phillips Petroleum Co., total		31,134		
Grand Total Jones County		51,171		Phill-Tex.
LOVING COUNTY—				
Lockhart & Co., Allen 1	31	930	930	Farm str.
P. V. Petroleum Co., Wheat 1	31	93	93	Farm str.
Grand Total Loving County		1,023	1,023	
MITCHELL COUNTY—				
Atlantic O. P. Co., Ricker 1 to 7	31	7,505	7,910	Col.-Tex.
Eastland Oil Co., Adams 1	31	1,330		
Eastland Oil Co., Clark 1	31	187		
Eastland Oil Co., Elder 1	31	730		
Eastland Oil Co., Handley 1	31	320		
Eastland Oil Co., Keynard 1 to 4	31	2,393		
Eastland Oil Co., total		4,965	4,965	Col.-Tex
Magnolia, C. M. Adams 1 to 8	31	9,914	9,648	Col-Tex.
Magnolia, F. Adams 1 to 4	31	5,095	4,981	
Magnolia, Baggett 1	31	234	225	
Magnolia, Coleman 1	31	155	140	
Magnolia, M. Foster 1 to 4	31	2,756	2,690	
Magnolia, O'Neal 1	31	310	285	
Magnolia, A. P. Watson 1	31	295	265	
Magnolia, W. W. Watson 1	31	659	645	
Magnolia, G. W. Womack 1	31	543	500	
Magnolia Petroleum Co., total		19,961	19,379	Col-Tex.
Morrison & Thompson, Morrison 1	31	360	475	Col-Tex.
California Co., Abrams 1 to 10	30	6,832	6,281	Col-Tex.
California Co., Adams, Lease 2, 1 to 5	31	6,016	5,601	Col-Tex.
California Co., Adams, Lease 3, 1, 2, 3	31	4,166	4,029	Col-Tex.
California Co., Butler, Lease 1, 1, 2	26	588	905	Col-Tex.
California Co., Clark, Lease 2, 1	31	966	852	Col-Tex.
California Co., Elder, Lease 1, 1	31	470	573	Col-Tex.
California Co., Elder, Lease 2, 1 to 5	31	6,046	5,526	
California Co., W. L. Foster 1, 2, 3	31	5,974	5,518	
California Co., Dock Handley 1	31	1,402	1,326	
California Co., LeSure, Lease 1, 1, 2	31	938	789	
California Co., A. L. Miller 1 to 6	31	3,742	3,804	
California Co., H. C. Miller 1, 3, 4, 5, 6, 7, 8, 9	30	7,608	5,399	
California Co., J. D. Petitfils, Lease 1, 1 to 3	31	5,387	4,940	
California Co., J. D. Petitfils, Lease 2, 1 to 4	31	3,782	3,458	
California Co., Mo. State Life 1	31	886	842	
California Co., E. Morrison, Lease 2, 2 to 18	31	10,832	10,613	
California Co., E. Morrison 1	31	595	557	
California Co., O. Handley 1 to 4	31	4,891	4,720	
California Co., Smart 1 to 7	31	3,549	2,487	
California Co., Swenson 1, 2	31	2,442	2,074	
California Co., Womack 1 to 7	31	7,366	6,808	
California Co., total		84,528		
Tidal Oil Co., Baggett 1	31	437	420	
Tidal Oil Co., Handley 1	31	520	496	
Grand total Mitchell County		118,276	126,716	Col-Tex.
PECOS COUNTY—				
Allsman & Bell, River Bed 1	31	5,197	5,117	Ill. P. L.
Mid-Kansas and Transcontinental, Smith-Taylor 1	31	22,360		
Mid-Kansas and Transcontinental, Yates-A 1, 2, 3	29	35,772		
Mid-Kansas and Transcontinental, Yates-A 4	31	19,751		
Mid-Kansas and Transcontinental, Yates-A 5	2	1,619		
Mid-Kansas and Transcontinental, Yates-A 6	31	12,262		
Mid-Kansas and Transcontinental, Yates-B 1	31	18,792		
Mid-Kansas and Transcontinental, Yates-B 2	28	16,005		
Mid-Kansas and Transcontinental, Yates-C 1	30	14,915		
Mid-Kansas and Transcontinental, total		142,376	155,000	Ill. P. L.
Texon O. & L. Co., Yates 1		Off		
California Co., Yates 1	3	8,522	1,000	Ill. P. L.
Grand total Pecos County		156,095	161,197	
REAGAN COUNTY—				
Big Lake Oil Co., University 1 to 108	31	721,782	415,093	Reagan Co. Pur.
Texon O. & L. Co., University, Group 1	31	196,987	196,951	Reagan Co. Pur.
Grand total Reagan County		718,769	612,644	
SCURRY COUNTY—				
Northwest Oil Co., Newman 1	31	217	217	Farm storage
Northwest Oil Co., Moore 1 and 2	31	558	558	
Northwest Oil Co., Welborn 1	31	341	341	
Grand total Scurry County		1,116	1,116	
UPTON COUNTY—				
Amerada Petroleum Corp., Hughes 1 to 6	31	11,272	11,233	Mar. P. L.
Atlantic O. P. Co., Sherk 1	31	1,268	1,243	H. P. L.
Bryant et al, Baker 1, 2	31	2,203	2,196	H. P. L.
Dixie Oil Co., Burleson 1 to 4	31	253		
Dixie Oil Co., Burleson 5, 6, 8	31	544		
Dixie Oil Co., Burleson 7 and 13	31	331		
Dixie Oil Co., Burleson 11, 14, 20, 26	31	6,944		
Dixie Oil Co., Burleson 15, 16, 17, 18, 22, 23	31	44,420		
Dixie Oil Co., Burleson 19, 21, 24, 25	31	12,885		
Burleson total		88,619	84,140	So. P. L.
Dixie Oil Co., Hughes 1, 2, 3, 7, 12	31	4,137		
Dixie Oil Co., Hughes 5, 8, 9, 10, 11	31	3,767		
Total Hughes		7,904	7,108	So. P. L.
Dixie Oil Co., total		96,523	91,248	
Gulf Prod. Co., Baker B-2	31	1,426	1,412	Mar. P. L.
Gulf Prod. Co., Estep 1, 2	31	8,023	7,916	H. P. L.
Gulf Prod. Co., Hughes 1, 3, 4	31	2,112	2,087	H. P. L.
Gulf Prod. Co., Hughes-B 2	31	910	826	H. P. L.
Gulf Prod. Co., Lane-C 1	31	4,220	4,190	H. P. L.
Gulf Prod. Co., Lane, J. F., 1, 2	31	78,169	77,319	H. P. L.
Gulf Prod. Co., Sherk 1	31	1,805	1,773	
Gulf Prod. Co., total		96,665	95,523	
Humble O. & R. Co., Burleson 1 to 4		1,054	1,039	H. P. L.
Humble O. & R. Co., Ricker 1, 2, 3		26,164	25,837	H. P. L.
Humble O. & R. Co., total		27,218	26,876	

Patents Pending

JIMMIE SHOOTER SAYS:

"The Bolshevik people originated the Time Bomb method of shooting oil wells. They made the first Time Bomb and shot the first oil well using this new principle. We shooters have endorsed the Bolshevik Bomb by using almost 4000 of them—the safety device on each one suits us and protects our customers."

The Pioneer of All
~ first and safest

The introduction of the Bolshevik Time Bomb created an entirely new method for shooting oil wells. Nothing like it had ever been heard of before. Today it is fast becoming the universal method of detonating shots.

Since the shooting of the first oil well in this manner on May 7, 1923, the manufacturers of the Bolshevik have, without exception, followed the policy of marketing this Time Bomb through established channels,—the Glycerin-Torpedo Companies and their organization of skilled explosive experts.

As a result of this fixed policy, and the safety and reliability of the Bomb itself, *617* different Oil Companies are using the Bolshevik to detonate their shots. *15* Glycerin-Torpedo Companies carry the Bolshevik in stock. Over *150* shooters run them for you.

One shooter to notify.
One billing for shot and bomb from
One established Glycerin-Torpedo Company.
Shooting a well is a one man job—

The Bolshevik is entirely MECHANICALLY OPERATED—every moving part visible.

No wiring to short circuit.
No chance of grounds or sneak currents.
No battery trouble, with

The Bolshevik Time Bomb

See your shooter—he carries them

$50.

ONE PRICE TO ALL

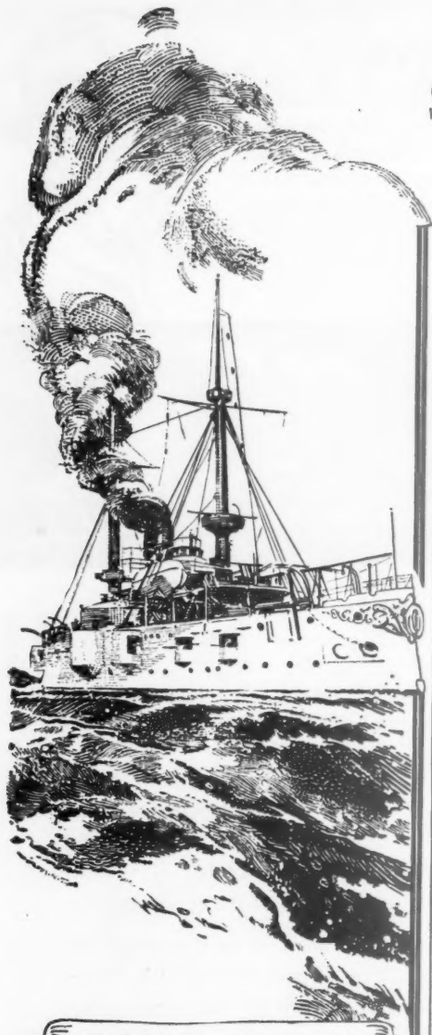
Bolshevik Time Bombs are sold through established Glycerin-Torpedo Companies ONLY, at a standard price of $50.00 to everybody, for the Regular and Baby Bolshevik, $55 in Rocky Mountain Region. The Twin Bolshevik (with TWO separate clocks and TWO firing mechanisms in one container) sell for $80.00.

The M. & M. Manufacturing Co.

528 Citizens Bank Bldg. **Independence, Kansas**

100 YEARS OF STEEL IMPROVEMENT

Number Six in a Series of Advertisements



The U. S. S. Texas, while authorized in 1886, was not commissioned until August 1895. She played a leading part in the Battle of Santiago, July 3, 1898. Although other naval vessels commissioned prior to 1895 had Nickel Steel armor, the U. S. S. Texas was the first battleship protected with Nickel Steel.

THE U.S.S. TEXAS

OF SPANISH-AMERICAN WAR FAME, WAS THE FIRST AMERICAN BATTLESHIP AND THE FIRST TO BE ARMORED WITH NICKEL STEEL

THE adoption by the United States Government of Nickel Steel as a material for armor-plate dates from the tests made at Annapolis, in 1890.

In the Annual Report of the Secretary of the Navy, for that year, he made this statement relative to Nickel Steel: "This liability to crack at shock or perforation seems to be removed by an alloy of about 5% of Nickel. The mixture enhances to a noticeable degree, qualities of elastic limit and tensile strength, leaving the percentage of elongation at a figure which makes cracking almost impossible."

The many years of Nickel Steel development have contributed to an extensive fund of information concerning the superior properties and many uses of these Alloys. You are invited to consult our staff of engineers and thus draw upon these helpful data.

SOME STANDARD APPLICATIONS OF NICKEL ALLOY STEELS

Armor-Plate	Ordnance
Axles	Railway Track Work
Boiler & Fire Box Plate	Roller Bearings
Boiler Tubes	Shafts
Bolts, Nuts, Rivets, etc.	Shovels
Castings	Special Tools
Crank Shafts	Steel Mill Rolls
Dies & Die Blocks	Structural Shapes
Forgings	Turbine Blading
Gears & Pinions	Valve Bodies
Mechanical Tubing	Welding Rod

FOR STRENGTH WHERE THE STRESS COMES

ALLOY STEEL

Send for Buyers' Guide of Nickel Alloy Steel Products

See OUR EXHIBIT NATIONAL STEEL & MACHINE TOOL EXPOSITION DETROIT CONVENTION HALL Sept 18-21 BOOTH 475

Nickel

FOR ALLOY STEEL

INCO NICKEL THE INTERNATIONAL NICKEL COMPANY (INC.), 67 WALL STREET, NEW YORK CITY INCO NICKEL

Company, Lease, Well No.—	Days Prod.	Total Prod.	P. L. Runs	REMARKS
Independent O. & G. Co., Burleson 1 to 7..		1,491	1,560	So. P. L.
Independent O. & G. Co., Taylor 1, 3, 4, 5, 6, 8, 10, 13, 48, 60, 73, 94		12,587	12,192	So. P. L.
Independent O. & G. Co., Wooley 2, 5, 4, 6, 7, 8, 12, 13, 14		18,303	17,130	So. P. L.
Independent O. & G. Co., total		32,381	39,882	
McMan O. & G. Co., Baker 1	31	1,074	1,006	H. P. L.
McMan O. & G. Co., Baker-A 1	31	120	100	Mar. P. L.
McMan O. & G. Co., total		1,194	1,106	
Marland Oil Co., Baker-A 1	31	595		
Marland Oil Co., Burleson 4 to 33	31	23,609		
Marland Oil Co., Burleson-A 1	31	196		
Marland Oil Co., Burleson-B 1	15	120		
Marland Oil Co., Estep 1, 2, 5, 6, 7, 9, 12 ..	31	22,660		
Marland Oil Co., Powell 1 to 4	31	6,530		
Marland Oil Co., Sanger 1 to 4 and 6 to 20.	31	13,871		
Marland Oil Co., total		66,994	55,198	Mar. P. L.
Prairie O. & G. Co., Lane 1 to 4	31	23,698	15,343	So. P. L.
			7,629	H. P. L.
Prairie O. & G. Co., Allie Lane 1, 2,	31	13,180	12,643	H. P. L.
Prairie O. & G. Co., total		36,878	35,615	
Republic Prod. Co., Baker 1 to 6	31	4,670	4,457	Mar. P. L.
Roxana Pet. Co., Bowen 1 to 26	31	78,799	80,078	Roxana
Roxana Pet. Co., Estep 1 to 3	31	1,905	1,912	Roxana
Roxana Pet. Co., Hughes 1 to 10 (No. 5 shut down)	31	10,885	11,049	Roxana
Roxana Pet. Corp., total		91,589	93,039	
Simms Oil Co., Shirley 1 to 3	31	3,243	3,585	H. P. L.
Snowden & McSweeney, Hughes 1	31	5,527	5,512	H. P. L.
Sun Oil Co., Baker 1, 2	31	2,220	2,063	H. P. L.
Sun Oil Co., Burleson 2 to 8	31	6,096	5,610	H. P. L.
Sun Oil Co., total		8,416	7,673	
Texas Pacific C. & O. Co., Lane-A 1 to 9...	29	85,774	66,920	H. P. L.
Texas Pacific C. & O. Co., Lane-B 1	23	652	1,235	H. P. L.
Texas Pacific C. & O. Co., Sherk 1 to 5	25	3,820	3,877	
Texas Pacific C. & O. Co., total		90,246	72,032	H. P. L.
The Texas Company, King 1 to 24	31	23,184	21,351	So. P. L.
The Texas Company, Burleson 1 to 4	31	1,324	1,640	Mar. P. L.
The Texas Company, Perry 1	27	3,796	3,876	So. P. L.
The Texas Company, Union Land Co. 1	23	122		
The Texas Company, total		28,426	26,867	
Texon O. & L. Co., Sherk 1	31	715	627	H. P. L.
Tidal Oil Co., Burleson 1	9	395	413	So. P. L.
Tidal Oil Co., Hughes 1	30	2,620	3,097	So. P. L.
Tidal Oil Co., total		3,015	3,510	So. P. L.
Wentz Oil Corp., Sherk 1, 2, 4	31	3,463	3,356	H. P. L.
White Eagle O. & R. Co., Hughes 1	31	352	346	So. P. L.
Grand total Upton County		612,258	572,124	
WINKLER COUNTY—				
Gulf Prod. Co., Hendricks 1	31	14,028	12,752	So. P. L.
Independent O. & G. Co., Hendricks 1	31	1,089	990	So. P. L.
Southern Crude O. P. Co., Hendricks 1-A-1.	31	7,654	7,413	So. P. L.
Southern Crude O. P. Co., Hendricks 1-C-1, Hendricks 1-C-2	31	25,542	23,220	So. P. L.
				So. P. L.
Southern Crude O. P. Co., T-88 Hendricks 1-A-1	31	2,315	2,105	
Southern Crude O. P. Co., total		35,511	32,738	
Grand total Winkler County		50,628	46,480	

CENTRAL WEST FIELDS

(Continued from Page 63)

parties hit a dry hole at a test 175 feet south of the highway and 60 feet from the west line of the D. K. Huntington 1-acre, Lot 20. J. W. Cushing's No. 1, 300 feet north of the highway and 225 feet from the west line of the M. Slamack 18 acres, Lot 29, is a good gasser. Daugherty & Dempsey found a dry hole at No. 1 in the northeast corner of the B. C. Austin 21 acres, Lot 32. In Strongville Township, same county, Dillon & McFrederick's test, 650 feet from the north line and 1,550 from the east line of the J. A. and J. G. Pack 75 acres, Lot 31, is credited with a colume of 1,500,000 feet open flow.

In Dover Township, Cuyahoga County, Foster & Foster are drilling a test in the northeast corner of the A. G. Hammond 11 acres, Lot 11, and L. M. McGrath is drilling a test in the northeast corner of the A. G. Gage 7 acres, Lot 7.

In Jefferson Township, Knox County, the Ohio Fuel Gas Co. drilled an average gas well at a test 460 feet from the north line and 1,100 from the west line of the J. A. Spring 57 acres, Section 35, and another good gasser in a test in the southeast corner of the C. M. Staats 60 acres, Section 4. East Ohio Gas Co. is drilling a test 437 feet from the north line and 600 from the east line at the Alvin Milton 50 acres, same section. In Butler Township, same county, Bell Brothers are drilling a second test 900 feet from the south line and 300 from the east line of the Allen Clark 80 acres, Section 20.

In Sullivan Township, Ashland County, a nice gas well was drilled in by the Ohio Fuel Gas Co. on a test 660 feet from the south line and 750 from the west line of the Emma Lucas 104 acres, Lot 99. In Green Township, the same company's test in the northeast corner of the E. J. Stitzlein 48 acres, Lot 22, came in a duster. In Clear Creek Township, the Logan Gas Co. is drilling a test 565 feet from the south line and 875 from the east line of the John Shaw 42 acres, Lot 12, and made a location for a test 660 feet from the south line and 400 from the west line of the J. J. and Thomas Brown 80 acres, Lot 12. Ringler and others are working at a test in the northeast corner of the Sprott 2 acres, Lot 12.

Medina County

In Lafayette Township, Medina County, the Logan Gas Co. drilled an average gas well at a test 450 feet from the north line and 733 from the east line of the I. C. Leggett 30 acres, Lot 8, and made a location for a test 450 feet from the north line and 245 from the east line of the John Lutsch 13 acres, same section. Empire Gas & Fuel Co. brought in a nice gas well at No. 4 well, 800 feet from the north line and 300 from the west line of the Charles H. Puchhas 90 acres, Lot 30.

In Liverpool Township, the Ohio Fuel Gas Co. drilled in an average gas well at a second venture on the W. E. Boje 99 acres, Lot 2.

Empire Gas & Fuel Co. struck a duster at a test in the northwest corner of the J. N. Ganyard 100 acres, Lot 35.

In the Chatham Field in Chatham Township, E. R. Edson & Son Co's. No. 23, on the W. P. Wertz farm, Lot 5, Section 14, pumped about 1 bbl. at 385 feet and No. 24 same farm, proved the same kind of a pumper at the same depth.

Lorain County

East Ohio Gas Co. drilled in a light gas well at a test in the northwest corner of the Hannah Hudson 8½ acres, Lot 70, and the Ohio Fuel Supply Co's. No. 1 John Weitzel farm, Lot 35, is a light gasser at 2,980 feet. Same company is drilling a test 1,425 feet from the south line and 360 from the east line of the R. R. Fitch 50 acres, Lot 16.

A wildcat test is being drilled by the Ohio Fuel Co., 700 feet from the north line and 800 from the west line of the J. Grabebstetter 102 acres, Lot 51, Grafton Township.

Wayne County

John Arthur drilled a dry hole at a second test, 450 feet from the north line and 300 from the east line of the George N. and Sarah Shaffer 80 acres, Section 28, Chippewa Township, Wayne County. East Ohio Gas Co. has a location for a test 600 feet from the south and west lines of the John Weintzheimer 73 acres, Section 12.

Ohio Fuel Gas Co. has a fair gas well at a test in the northwest corner of the Paul D. Grady 85 acres, Section 8, Chester Township, and is drilling a test in the northwest corner of the Jacob and Fannie Tyson 80 acres, same section.

The Logan Gas Co. is drilling a test 660 feet from the south and west lines of the William Swope 80 acres, Section 12, Congress Township, also nearing sand at a test 660 feet from the south line and 590 from the east line of the Ohio P. Ferguson 80 acres, Section 16, same township.

Holmes County

In Hardy Township, Holmes County, the East Ohio Gas Co's. No. 4, in the northeast corner of the J. R. Hastings 35 acres, Lot 39, is credited with a showing of from 8 to 15 bbls. Empire Gas & Fuel Co's. No. 1, on the Degler heirs No. 2 farm, better known as the Horn farm, Lot 25, is credited with an initial of 20 bbls. Same company is drilling No. 1 well near the northwest corner of the William Watts 153 acres, Lot 13. Palmer & Gisinger made a location for No. 3 well 300 feet from the south line and 800 from the west line of the George Schuler 25 acres, Lot 14.

In Monroe Township, the Lydie Gas Co. made the location for a test in the southeast corner of the Jennie Bell 50 acres, Lot 1. The Arkansas Oil & Gas Co. is drilling No. 4 well, 1,000 feet from the north line and 300 from the west line of the William Miller 20 acres, Lot 11.

In Knox Township, the Logan Gas Co's. No. 2, in the northeast corner of the L. S. Siddle 40 acres, Lot 16, is a dry hole. Same company made a location for a test, 530 feet from the south line and 865 from the west line of the Daniel Mosier 80 acres, Lot 19, and the Kenrow Co. is drilling a test 500 feet from the north line and 450 from the west line of the Frank Young 120 acres, Lot 25.

In Richland Township, the Logan Gas Co. made a location for a test, 600 feet from the north and east lines of the Malissa Manchester 100 acres, the well being located on the southeast 40 acres, Lot 14. The Kemrow Co. made a location for a test 660 feet from the south and west corner of the Frank Ledbetter 39 acres, Lot 17.

Scattered Operations

In Perry Township, Cochocton County, the Logan Gas Co's. test in the southwest corner of the D. and S. McMillin farm, Section 14, is reported good for 20 bbls. Sand was found at from 3,062 to 3,104 feet and sent to a total depth of 3,124 feet. In Monroe Township, the Empire Gas & Fuel Co. is drilling a test 572 feet from the north line and 476 from the west line of the H. A. Brush 40 acres, Section 11. It is also drilling at a test 722 feet from the south line and 594 from the east line of the H. R. Brillheart 120 acres, Section 9. East Ohio Gas Co. is drilling No. 3 well, 675 feet from the north and east lines of the M. J. Nyhart 41 acres, Lot 2 and the Logan Gas Co. is drilling No. 1 on the Oliver Borden farm, Lot 18, same township.

The Logan Gas Co. made a location for a test, 660 feet from the north and east lines of the W. C. Copeland 145 acres, in the third quarter of Madison Township, Muskingum County.

In Franklin Township, Summitt County, the East Ohio Gas Co. made a location for a test, 500 feet from the north and east lines of the Dobert Miller 162 acres, Section 28.

KENTUCKY-TENNESSEE

(Continued from Page 64)

found in Lee, Estill and other parts of the eastern division, while in the western division, the operators of Barren County are rushing their drilling wells to completion with a view of shutting down active development for a period at least. In Ohio County, James C. Ellis and the Leeper Oil Co. have let up on drilling operations within defined limits and will do wildcat work in hopes of opening some new territory to develop as soon as prices for crude show an upward turn. Many other operators over the State are planning the same way and if stories are true, there will be a large amount of test work done before the close of the current year.

Completion of wells is very slow in the Tennessee fields, as operators are feeling their way in a careful manner and numerous dusters have been found recently where good production was expected. No completions are reported from Mississippi, Alabama or Florida of late, as many of the drilling wells have been shut down for some reason or other.

Week's Work

A summary of the week's work in the Kentucky-Tennessee fields show 45 completions, 26 producers with an initial production of 686 bbls., 18 dry holes and 1 gas well. Compared with the previous week there were nine less completions, six less dry holes, 912 bbls. less production, four less dry holes and one more gas well. The wells were distributed by counties and districts as follows:

County—	Comp.	Oil Wells	Prod.	Dry	Gas
Barren	14	10	69	4	0
Wayne	4	1	25	3	0
Cum'land-Monroe	4	2	14	2	0
Estill	4	3	7	1	0
Owsley	2	2	450	0	0
Lee	2	2	5	0	0
Ohio	2	2	57	0	0
Clinton	2	1	25	1	0
Warren	2	2	14	0	0
Johnson-Magoffin	1	1	20	0	0
Daviess	1	0	0	1	0
Kentucky	38	26	686	12	0
Tennessee	7	0	0	6	1
Total	45	26	686	18	1
Last week	54	32	1,598	22	0
Difference	9	6	912	4	1

Tennessee

The Tennessee area has been hard hit again with a number of failures where production looked certain, but it is evident that nothing is certain in the hunt for oil in the hills of the Volunteer State. Clay, Macon, Overton, Fentress, Jackson, Scott and other counties in the northern portion are abounding with structures as are several counties to the south, clear across the State to the Alabama-Mississippi lines, but it has been found time after time, that structure does not at all times contain oil in commercial quantities, but when one is found that does contain petroleum it usually comes in large volume but does not always last any definite time, which makes it an all around uncertainty.

The wildcat of John H. McClurkin on the Dr. W. W. Tucker farm, on Long Fork Creek, 6 miles west of Red Boiling Springs, in Macon County, is still a gas well after finding about 27 pays of gas at a total depth of around 400 feet. Mr. McClurkin expects to drill this well to a lower sand, if the heavy gas pressure subsides so that work can be done. Several blowouts occurred in getting the hole to its present depth and proved expensive operating as much damage was done at each blowout. Supposition is that productive oil areas will be found in the future somewhere close to this heavy gas volume.

Six dry holes are reported completed in Clay County, which does not look any too encouraging at this time. Among them are the H. Z. Clark Co.'s No. 1 Neeley farm; Cumberland Valley Oil Co.'s No. 2 Burton Langford farm; Chicago Petroleum Syndicate's No. 1 on the Clay County poor farm; Leach and others' No. 1 on an unknown farm; Palmer Oil Corp.'s No. 1 on an unknown farm, and Livingstone parties' No. 1 on the Thomas F. Dailey farm.

Eastern Kentucky

Owsley County takes the lead so far as good producers are concerned for the week, and territory in the Island City Field of that county is at a premium at this writing. The Petroleum Exploration Co.'s No. 1, on the J. F. Brewer farm, is estimated as good for around 250 bbls. initially. It is an offset to the big well drilled by McGuire and others last November on the south 50 acres, off the J. F. Brewer farm, which was turned over by the Petroleum Exploration to these parties for a drilling of a test, which was the big well. The other producer is No. 3 on the south 50 acres of the J. F. Brewer farm, operated by the

Big Injun Oil Co., composed of Mr. McGuire of Beattyville and Louisville parties, which is also reported showing for 250 bbls. initially at around 700 feet. Numerous new locations have been made in the vicinity of the producing wells and the next few weeks will see quite a drilling campaign. It is a rugged country and hard to get into with supplies, which will delay work to a great extent.

In the Monticello Field, of Wayne County, District 3, John Dillon's No. 1, on the Silas Burnett farm, is a 25-bbl. initial producer. In District 5, same county, C. M. Wok drilled dry holes at Nos. 1 and 2 on the Simpson heirs' farm. In District 13, same county, P. H. Kennedy and others' No. 7, on the J. B. Stinson farm, is a duster.

In Lee County, District 17, the Harris & Spence D. & P. Co.'s No. 1, on the Darts and Short land, is a 2-bbl. pumper. In District 20, same county, Tipton and Tackett's No. 1, Sarah Vanderpool farm, is a 3-bbl. pumper, while August Garard and others' No. 3, on the Sarah Chambers farm, is a 1-bbl. pumper.

In District 8, Estill County, the Superior Oil Corp.'s No. 12 W. P. Wise farm, is a 2 bbl. pumper, as is No. 11 on the A. F. West and others' farm, while No. 16, on the J. D. Alexander farm, is a duster. Wood Oil Co. has a 3-bbl. pumper at No. 4 on the Isaac Henry farm, same district.

In Johnson-Magoffin Counties, Oliver Jenkins and others' No. 2, on the Coon Adams farm, District 31, produced 20 bbls. initially.

Western Kentucky

Operations are taking a slump in new work starting, but quite a number of wells have been brought in, but at the same time few new ones will start up. The Glasgow Field of Barren County listed the greater number of completions, but the wells are small producers and production took an awful slump, that is new production of recent completed wells in the productive area of Ohio County, where big wells have been the result of the drill for several months past. Heavy rains may have been the cause to a large extent in the slowness of bringing in new wells.

Barren County

In the Emery Moore Pool, of Barren County, Bishop and others' No. 2 Bishop farm, is a 3-bbl. pumper, while Lyons, Hartzel and others have a 1-bbl. pumper at a second test on the Gassaway farm. Gassaway Brothers got a dry hole in No. 1 on the Dausey farm.

In the Hall Baker Pool, Snyder, Smith and others' test, on the Mines Williams farm, is a 2-bbl. pumper.

J. C. Esslinger drilled a rank duster in a test on the Card farm, in the Cave City territory.

In the Temple Hill section, south of Glasgow, T. L. Gorby struck a dry hole in a test on the Foster farm.

Hunt, Leach and Mitchell's third test, on the Hayden Jones farm, in the Coral Hill area, was also a duster.

In the Lecta Pool and extensions to the southeast of Glasgow, the Samson Oil Co.'s second test, on the Johnson farm, is a 12-bbl. initial pumper. Hunt, Leach and Mitchell's Nos. 20 and 21 Vance G. Taylor farm, are 20-bbl. initial producers from the Blue sand. A. W. Ziegler has a 1-bbl. pumper at a test on the Bunch farm. Esslinger Oil Co.'s No. 1 Wright farm, pumped 3 bbls. initially. Browning Oil Co.'s No. 5 Walter Browning farm, is a 5-bbl. pumper, while W. L. Baird's test, on the Johnson farm, is good for 2 bbls. under pump.

Warren County

West of Bowling Green, in Warren County, the Thompson Oil Co.'s No. 6 well, 200 feet from the south line and 1,400 feet from the west line of the Joe McLemore's farm, pumped 12 bbls. initially at 1,050 feet, known as the deep sand. In the same area of the county, Onsel Brothers and others' No. 7 well, 800 feet from the north line and 1,000 feet from the west line of the C. G. Davenport farm, pumped 2 bbls. at 1,051 feet. This is on a 91½-acre tract, in Block 4.

Cumberland-Monroe Counties

In the Crocus Creek Field of Cumberland County, Baird & Hickman's second well, on the Elliott farm, is a 2-bbl. pumper. This area several months ago brought forth wells that started off much better than 100 bbls., or more, but became nearly exhausted, which is the history of many sections of Cumberland County.

In the Goose Creek area, Thresher, Shouse and others' No. 1, on the Williams farm, is a dry hole.

In the Sulphur Creek district, Hook and McComas have a 12-bbl. pumper at a second test on the J. B. Riddle farm.

In the Kettle Creek area, Foster Mitchell's No. 1, on the Hiram Wells farm, is a dry hole.

Clinton County

In the Albany Field of Clinton County, Reed, McClintock and Heckathorn's No. 9, on the Pierce Brothers farm, is reported at 25 bbls. under pump. The Sells Oil & Gas Co.'s No. 1 M. A. Pierce farm, on Fannies Creek, is reported dry.

Daviess County

In Daviess County, Roby Pool, the Leeper Oil Co.'s No. 3, on the C. D. Veach 200 acres, failed to show any oil worth while in either the Jett or Barlow sands and goes as a dry hole. The drilling outfit has been moved to the John Roby 90-acre farm nearby to drill No. 6 on this property. Joe Young's No. 1, on the Agnes Abel farm, being drilled by Contractor Bert Thompson, failed to find a pay in the Jett sand and has drilled into the Barlow, the well being at a depth so far of 745½ feet.

Ohio County

Two completions are reported from the Ohio County area. In the Midkiff Pool, the White Plains Oil & Gas Co. set a string of 405 feet of casing, and found the sand from 437 to 455 feet in No. 2 on the Ura Howard 60 acres, shooting with 60 quarts, the well showing an initial pumping of 42 bbls.

The Kentucky Oil Co.'s second well, 600 feet from the south line and 200 feet from the east line of the Nora Chambers farm, in the Panther Creek district, pumped 15 bbls. initial production.

Two wells in the Ambrose Pool are in the sand. One is the Wood Oil Co.'s No. 12 on the Mary Elmore 100-acre farm, and makes a showing for an average producer for the pool, while the other is the Creek Drilling Co.'s No. 9 on the Sally Early, which shows for one of the good wells in the rich pool.

The drilling outfit that drilled the second well on the Chambers farm, has been moved for a test to the E. Bickett farm, where Contractor Philip Stewart will drill a test for D. J. White.

CANADIAN FIELDS

(Continued from Page 59)

preparatory to resuming drilling at 2,095 feet. The test will be carried to the producing horizon in the calcareous shales encountered in Home's No. 1, LSD 10, Section 20-19-2w5. When No. 2 was opened up some 400 feet of oil was standing in the hole. When work was temporarily discontinued last fall the well had a reputed production in this horizon of only 5 bbls. a day, though Home's No. 1 got about 30 bbls. a day in the same horizon.

Spooner Oils' No. 1, LSD 12, Section 13-20-3w5, is at 4,440 feet and underreaming to lower the casing to the bottom of the hole, the caving nature of the shales having made this necessary. Vulcan Oils' No. 2, LSD 11, Section 13-20-3w5, has resumed drilling at 3,180 feet after lowering the 10-inch casing to that depth.

New McDougall-Segur's No. 1, LSD 14, Section 12-20-3w5, has 3,300 bbls of tankage filled with crude, and is setting up another 250-bbl. tank. Pumping has been temporarily discontinued, the bad roads making it impossible to move out the production by truck. New McDougall-Segur's No. 2, same LSD, is at 1,915 feet and drilling. New McDougall-Segur's No. 1 at last reports was making 62 bbls. a day of light crude from the Dakota sand horizon at 2,595 feet.

Regent Oil Co., LSD 16, Section 1-20-3w5, is running 10-inch casing to the bottom of the hole at 2,710 feet. Although partly cased off, the crude oil sand is giving about 25 bbls. a day. Imperial Oil, Ltd.'s, refinery is taking the production.

Great West Oils' No. 1, SE Section 7-20-2w5, at 5,370 feet is working to clear the tools caught in the 8¼-inch casing at 2,000 feet. A further 20-gallon application of nitric acid has been lowered into the hole. Fishing for the tools will probably resume next week.

Seneca Oils, LSD 1, Section 34-20-3w5, is running 10-inch casing to the bottom of the hole at 2,706 feet.

In the northern end of the Turner Valley Field, Stockmen Oils, LSD 1-2, Section 27-20-3w5, is reported fishing for a lost bailer at 5,300 feet.

New Valley Oil Co., LSD 4, Section 6-21-2w5, is reported at 1,805 feet and drilling single tour. Some slight traces of oil and gas have been encountered.

College Men Visit Field

A party of Princeton students and professors, in charge of Doctor Field, visited the Turner Valley Field last week. Dr. G. S. Hume of the Geological Survey of Canada gave a description of the geological features, beginning at the Sentinel well, and the party observed the various outcropping formations. The visitors were entertained at lunch at the Royalite Oil Co.'s plant, and J. H. McLeod and Dr. O. G. Hopkins of the Imperial staff conducted them over the plant. Accompanying the Princeton students were Doctor Bailey of the Scottish Geological Survey and Doctor Collett, a Swiss geologist.

On the Morley Indian Reserve, Gold Coin Oils, which has been shut down waiting for a cable, has resumed drilling at 3,210 feet.

In the Moose Mountain district, Signal Hill Oil Co.'s No. 1, LSD 9, Section 34-23-5w5, is pulling the casing preparatory to plugging the hole with cement. No. 1 was the old Moose Mountain's No. 2, drilled in the later days of the Calgary boom, and which got some traces of oil at 2,025 feet. It was staken over by the Signal Hill Oil Co. a couple of years ago, but owing to drilling difficulties, a new test, Signal Hills' No. 2, was started on the same LSD. The casing salvaged from No. 1 will be used to finish No. 2, which is standing at 1,450 feet. At a recent meeting of the Signal Hill Oil Co. directors the following officers were elected: President, S. J. Fee; vice president, William Turner; secretary-treasurer, Sanford Davis. The other directors are J. B. Pascoe, W. J. Ovans, J. Van Alstein, all of Calgary, and Dr. A. W. Bowles of Gleichen.

It is unofficially reported that following some showings of gas encountered in the Imperial-Highwood's No. 1, LSD 3, Section 36-18-3w5, on the northeast end of the Sinclair structure, Imperial Oil, Ltd., has tentatively decided to drill a second test in another part of the same general area. Banner Oils, Ltd., is going ahead with its test in LSD 6, Section 34-17-3w5. A cable tool outfit with spiral stem will be used. The Banner test is close to the old Calgary-Alberta Oil Co.'s well, drilled at the time of the Calgary boom and which got a show of shallow oil at 327 feet.

May Drill All Winter

In the Warner district, southern Alberta, Gas Production & Transportation's No. 1, NE Section 21-4-18w4, is drilling, the test being started with a 22-inch bit. The derrick and machinery have been entirely enclosed, with a view to drilling through the winter.

In the Foremost Field, Canadian Western Natural Gas Co.'s No. 8, LSD 12 Section 5-6-10w4, is working on casing at 2,280 feet.

In the Cypress Hills area, Eagle Butte Oil Co., headed by C. E. Roth, is reported moving in drilling equipment and timbers for two tests. No. 1 will be drilled in LSD 3, Section 31-7-4w4.

In the Pincher Creek district, southwestern Alberta, Mount Royal Oil Co.'s No. 1, LSD 4, Section 7-6-1w5, is shut down at 250 feet. It is understood the company will be reorganized.

Calgary men, including Frank Moodie, Dr. W. A. Piper, George Wright and John McCaffery are reported interested in a project to drill on the Beaver Dome, in southern Alberta. The Beaver Oil Co. drilled a test on this structure in 1915-1916, finishing with a 6-inch hole around 3,000 feet. A gas production of 12,000,000 feet a day was claimed for the well at one time, and it is understood oil showings were met at two horizons, a light oil at 1,400 feet, and a heavy asphaltic oil at 2,800 feet. The latter horizon is thought to correspondent to the Ellis sand producing horizon encountered in Devenish Petroleum's No. 1 at 3,080 feet. Traces of oil are coming with the water flowing from the casing and which appears to have drowned out the gas.

South of the international boundary, the S. Hart Green syndicate of Winnipeg, Man., headed by T. B. Kyle, is reported getting ready to sink No. 2 test on the Lerum acreage, 6 miles south and east of Sweetgrass, Mont., the test to spud in by September 1.

In the Viking Field, east-central Alberta, Northwestern Utilities' No. 14, is reported drilling at 2,000 feet and is close to the gas sand.

It is reported that the Midwest Refining Co. of Denver has a geological party at work in the Rocky Mountain area of Alberta, with headquarters at Banff. The party is gathering data on the geological conditions exposed by the Rocky Mountain uplift.

In the Lesser Slave Lake area, northern Alberta, International Oils, Section 14-74-4w5, is reported to have encountered some showings of heavy crude, though not apparently in commercial quantities. The test is below 2,300 feet.

It is reported that Saskachewan men are interested in a project to drill on the Mountain View structure, near Rosetown, Sask. A report on the structure by J. O. Williams of Edmonton indicates that the formations are shales to a depth of about 1,650 feet underlain by sandy formation which may carry gas and oil. There are no known oil seepages in the area, but fair-sized gas seepages are numerous on the creeks. A rotary test may be drilled this season. The Prudential Oil Co. of Regina is reported to be arranging to start drilling near Gull Lake, Sask.

In Ontario, the Leslie Morningstar pumping outfit in the Oil Springs Field, Lambton County, was recently destroyed by fire. The loss is estimated at $1,000.

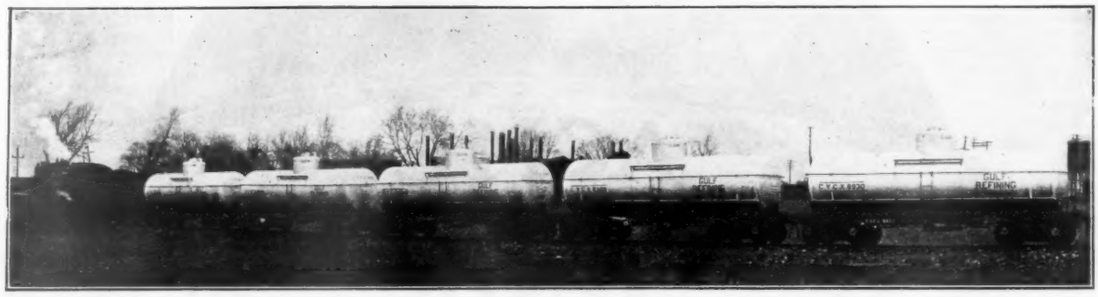
CALIFORNIA FIELDS

(Continued from Page 61)

the deep sand. The completion of these three wells during the past week brings the daily production of the Pan American and Petroleum Securities up to approximately 7,000 barrels. The California Eastern Oil Co., which has finished something like six or eight fairly large producers during the past 30 days, has just recompleted two more. These were No. 1 Fleming and No. 1 Graves. The former, which was originally completed last month, flowing 700 barrels per day from the Selover zone at 4,920 feet, was recompleted after being redrilled and deepened to 5,060 feet, from which depth it registered an initial of 1,050 barrels of clean 29.8 gravity oil and 5,000,000 feet of gas per day. No. 1 Graves, which was also originally finished during the month of July, was recompleted a few days ago, after being redrilled and deepened to the lower sand at 5,276 feet. It was returned to production flowing 2,210 barrels of fairly clean 28-2 gravity oil daily, and the consistent gas pressure maintained since completion tends to indicate that a fairly well-established production can be anticipated for some little time. This company, under the direction of Colonel Foster, is now getting its share of production, and will probably continue to do so for some time, as three other former producers are at present on the way down to the deep sand.

Failed to Find Selover

The General Petroleum failed to pick up the Selover horizon on its Wasem lease, and, while subsequent drilling revealed the presence of a second zone, the initial completion in the lower horizon several weeks ago did not show any unusual prolific tendencies. The completion of No. 3 Wasem a few days ago, however, has thrown a different light on the subject, and the company



ALUMINUM PAINT

The New Armor Plate of Industry

IN Aluminum Paint, American Industry is finding a new ally against all sorts of destructive agencies.

Throughout the country, industrial structures and equipment are donning the new silver-gray armor that protects them from the inroads of smoke, fumes and corrosion.

Aluminum Paint involves a new principle. When sprayed or brushed on wood, iron, steel, brick or cement, its tiny flakes flatten out, "interleaf" and form a continuous metallic covering—much more durable and serviceable than ordinary paints.

From producing fields to consuming centers go the Aluminum Painted tanks of the great oil companies. Reflecting the sun's heat instead of absorbing it. Guarding against evaporation by keeping the contents cool.

The Aluminum Painted tank train shown here is the property of the Conley Tank Car Company, who heartily endorse Aluminum Paint for this purpose.

Aluminum Paint does more than give protection. Its bright, silver sheen reflects and diffuses light and improves interior working conditions. One coat will suffice for interior painting—hiding any color, even black.

* * *

A booklet, "Aluminum Paint," gives the details about this super-protective paint for plant and equipment. Write now for your copy.

The best grade of Aluminum Paint consists of ALBRON (Aluminum Bronze Powder) and a suitable vehicle of oil or varnish.

ALBRON pigment is always made of Pure ALCOA Aluminum.

Trade ALBRON ALUMINUM BRONZE POWDER Mark

Trade ALBRON ALUMINUM BRONZE POWDER Mark

Aluminum Company of America

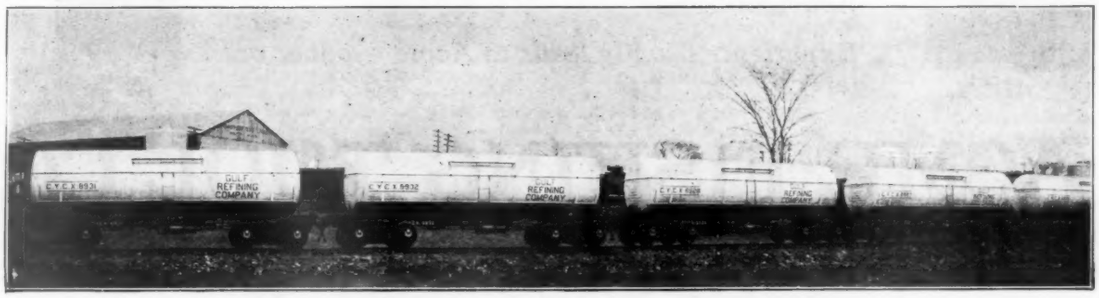
2417 Oliver Building, Pittsburgh, Pa.

Offices in 18 Principal American Cities

Albany, N. Y.
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Cleveland, O.
Dayton, O.
Detroit, Mich.
Indianapolis, Ind.
Kansas City, Mo.
New Haven, Conn.
Newark, N. J.
New York, N. Y.
Philadelphia, Pa.
Pittsburgh, Pa.
San Francisco, Cal.
St. Louis, Mo.
Toledo, Ohio
Washington, D. C.

ALUMINUM COMPANY OF CANADA, LTD., Toronto, Montreal, Canada

ALUMINUM IN EVERY COMMERCIAL FORM



Quality
Service
Value

Surest
Safest
Longest Lasting

ACME

POINTS TO EXPERIENCE
EXPERIENCE POINTS TO

ACME

DRILLING AND FISHING TOOLS

The B & R Wire Line Drilling Clamp

The simplest Clamp with the Greatest Gripping Power

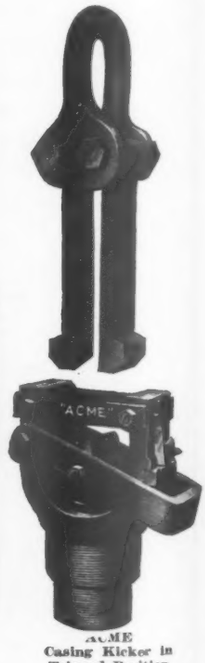
ACME
Fish Tail Bits

ACME
Drilling Bit

Most Acme Tools were thought out at the well. They owe their origin to the ideas conceived in practice—not in the drafting-room. Expensive experiences lead the way to the majority of Acme tools. Because of this Acme users are equipped with trouble-saving, time-economizing drilling equipment that will be of great assistance under the services they were designed for and for which they have been proven to be a step better,—a trifle more satisfactory. In every driller's life there comes a time when he despairs of finding a tool that will do the job the way he wants it done. When that time comes to you—take your search to Acme. If there is a chance of success you will most likely find the key in an Acme tool.

Experience usually leads to Acme—sooner or later.

ACME
Drill Mill



ACME
Casing Kicker in Tripped Position

ACME FISHING TOOL CO.

Parkersburg, West Virginia.

Export Office: 136 Liberty St., New York City, N.Y.

Warehouses and Distributors:

Acme Fishing Tool Company—Parkersburg, W. Va.
Acme Fishing Tool Company—Omulgee, Okla.
B. & A. Specialty Company—Tulsa, Okla.
Acme Fishing Tool Co. of Tex.—Whittenburg, Tex.
Acme Fishing Tool Co. of Tex.—Roxana, Texas.
Acme Rental Tool Service Company—Graham, Tex.

Acme Tool Co.—Breckenridge, Tex.
Acme Tool Co.—Albany, Texas.
Acme Tool Co.—Brownwood, Texas.
Acme Tool Co.—Cross Plains, Tex.
Acme Tool Co.—Fry, Texas.
Acme Tool Co.—McCamey, Texas.

Midland Iron Works—Billings, Montana.
Great Northern Tool & Supply Co—Kevin, Montana.
Great Northern Tool & Supply Co.—Kemmerer, Wyo.
Elms Brothers & Company—Waynesburg, Penna.
Lloyd, Smith Company—Bradford, Penna.
Logan Foundry & Machine Company—Logan, Ohio.

can expect a better showing from now on. This new well, which was carried down to 5,332 feet, came in flowing 895 barrels of clean 28.1 gravity oil daily, and if it continues to build up as it has since completion it may possibly do better than 1,000 barrels per day. The Standard has wisely curtailed its drilling operations in this field, and, with the recompletion of No. 11 San Gabriel a few days ago, is now only running three strings of tools. The company's San Gabriel lease is located in the center of the older section of the Seal Beach field, and the absence of competitive drilling permits what amounts to a cessation of all development work. No. 11 San Gabriel, the Standard's recompletion, was returned to production flowing 1,640 barrels of clean 27.4 gravity oil daily from 4,734 feet, the hole being finished with a 6¼-inch oil string. This well was originally finished during the early part of July, at which time it registered an initial of 838 barrels from the 4,683-foot level. No. 14 San Gabriel, which blew out two weeks ago, simultaneously with a slight earthquake which occurred while the well was standing cemented, is being cleaned out, as a preliminary survey has indicated that the hole has not been damaged beyond recovery. A new rig is going up and much of the original drilling equipment has been salvaged for further use.

The California Petroleum Co.'s No. 1 Bailey, which came in last week flowing 2,484 barrels per day from 5,299 feet, is holding up exceptionally well, particularly in view of the fact that the well is producing under a serious handicap, with the bottom 20 feet of hole plugged off nearly solid with a fish. The daily average production for the week just ended was 2,062 barrels. The Marland Oil Co. did not succeed in finishing any new wells during the past seven days, but with six deepening projects under way the outlook is quite promising for several recompletions in the near future. The Superior should also list several deep zone wells soon, as it has four former producers now under way. The Walklin-Peacock Oil Co.'s No. 1 Alamitos, which was held up for a short time when the bit of an offset well deviated from the vertical and came in contact with the drill pipe in this well, was brought in two or three days ago flowing 1,970 barrels of clean 28.2 gravity oil and approximately 2,000,000 feet of wet gas daily. The Associated's No. 16 Hellman, which is located in the extreme eastern part of the Seal Beach Field, is perhaps the most interesting drilling project under way at the present time, as it is still in the oil sand at 5,430 feet, and indicates the possibility of a continuous deep sand from one end of the field to the other.

Huntington Beach

There were two new wells finished in the Huntington Beach Field during the past week, both of which, however, were relatively small. The Crudoil Co.'s No. 10 Huntington in the town lot section, which was drilled to 4,374 feet and finished with a 6¼-inch oil string carrying 240 feet of perforated, resulted in a 300-barrel pumper, the oil testing 22.1 degrees and showing a cut of 8 per cent. No. 16 Huntington in the same section should be completed in the near future, as it is at present in the oil sand at 4,354 feet. The Superior's No. 1 Ruby Jones, which was originally carried down to 4,210 feet, but plugged back to 4,070 feet because of bottom water, was listed for completion as a 90-barrel pumper, the oil testing 21.4 degrees and showing a cut of approximately 10 per cent. The World Oil has just landed a string of 6¼-inch in No. 5 M. & B., and the outlook at 4,370 feet is exceptionally promising for good production. J. E. Hayden's No. 1 Huntington is also showing up very nicely, and an excellent 25-foot core of well-saturated oil sand was recovered at 3,680 feet. The importance of this well lies in the fact that it is located in the rear of the Huntington Beach Inn, near the center of the business district of Huntington Beach on Ocean Avenue, between Eighth and Ninth Streets. It is a few hundred feet still further east than the San Martinez Oil Co.'s No. 1 Hanke, an outpost which recently came into production pumping 250 barrels per day from 3,945 feet, after an unsuccessful attempt to develop deep production. The Formax Oil Co., prominent Kern County operators, who went into a condemned area in the Rosecrans Field and developed production following a previous failure by another concern, recently leased something like 1,200 acres in the Bolsa area, north of Huntington Beach, and present plans call for an early conclusive test. J. E. McMahon, one of the four Macks, negotiated the leases, which consist of five separate parcels. J. E. O'Donnell spudded in his No. 1 Gotthard in Section 27-5-11 several days ago, and excellent footage is being made. This well is especially interesting, as it is approximately a half mile northwest of the California Petroleum's Buck lease in the extreme northern part of the Huntington Beach Field, which looks like an edge property. In the extreme southern part of the Huntington Beach Field the Petroleum Securities has No. 1 Mills down 3,492 feet, and this well may bear watching during the course of the next 60 or 90 days, notwithstanding the fact that some are inclined to believe that it is an exceptionally long shot. No. 1 Mills is located about a half mile southeast of the Standard's Surf property, which has yielded several small pumping wells. Merwin Rossan, building inspector at Huntington Beach, recently estimated that a total of $435,000 has been spent in rig construction in the town lot section within the past few months. This figure represents a total of 87 derricks, costing on an average $5,000 each. At this rate operators have expended in excess of $2,750,000 for rig construction alone in the Huntington Beach Field since discovery.

Long Beach

Two wells were put on production in the Long Beach Field during the past week, but one of them, the Shell's No. 7 Alamitos, was a distinct disappointment in the deep sand at 5,511 feet, as a fairly good well was anticipated. It only registered an initial of 90 barrels, but the gas pressure, 350 pounds on the casing, indicates the output may increase after the well has cleaned itself out. The Shell has four other deep sand wells nearing completion in this field, and this entire quartet on the Cresson lease should be tanking oil in the near future. The San Martinez Oil Co., which will dispose of its holdings at Long Beach to the Richfield Oil Co., as soon as the deal comes out of escrow, recompleted No. 6 Booth after redrilling and deepening it to 5,545 feet. The initial production, however, hardly warranted this extra work, as the well only showed a maximum of 250 barrels per day. There are two new wells drilling on this property, No. 8 down 3,700 feet and No. 9, a recent spud, which has just passed the 1,000-foot level. The Richfield, upon assuming possession of the San Martinez Oil Co.'s holdings, will no doubt institute a correctional program and immediately deepen some of the upper zone producers with good success. The former is making exceptionally rapid footage in No. 1 Kelly, a new well and unless something unforeseen develops it should be completed within the next 30 days. There are at the present time something like 18 or 20 new wells, and deepening project headed down to the lower sand, each of which, judging by previous completion, should be good for from 500 to 1,000 barrels each initially. The successful conclusion of this work will have a tendency to stabilize the daily production of the Long Beach Field, which at present is running around 92,000 barrels.

Rosecrans

Operators in the Rosecrans Field have suspended drilling operations almost entirely, and this restriction will continue in force until crude oil prices justify a resumption of work. The Barnsdall is not doing any drilling work of any character at the present time, but has two wells cemented just above the pay which could be drilled into production on very short notice. Both are in proven territory, and the company is assured of production whenever desired. The Union is following a similar procedure on the Rosecrans and Howard Park leases. Drilling operations in the Dominguez Field are in much the same shape, due to the splendid co-operation between the Union and Shell. The Eureka Refining Co., which is headed by E. L. Pauley, recently purchased the 32-acre lease of the Mohawk Oil & Gas Syndicate in the Inglewood Field, and while a transaction of this character would not ordinarily be of primary interest except to the principalws involved, it may have a direct bearing on the industry in general if the company carries out its original intention. The property acquired by the Eureka adjoins the Smith lease of the California Petroleum Corp., and is situated just east of the Standard's Vickers property. It is not particularly well situated, but should the company carry odt its intention of making a bid for production in the deep zone this action may force offset operators to cndertake similar work. If the Eureka only drills one well into the deep sand other operators will no doubt overlook this breach of the existing gentlemen's agreement by refraining from offsetting. If, on the other hand, all five wells on the Mohawk lease are deepened and fairly large production is secured, this may result in the drilling of some 10 or 15 offsets to protect adjoining acreage from drainage. Operators in the Inglewood field have for over a year refrained from undertaking any work which might precipitate a deepening campaign, and while there is a possibility of additional drilling soon, it will probably not become a reality, due to the desire of everyone involved to restrict production as far as possible.

Richfield-Brea Olinda

The Chanslor-Canfield Midway Oil Co. completed No. 8, a new well in the Richfield district, during the early part of the week, and it started off flowing 200 barrels of 24.6 gravity oil daily from 4,450 feet. No. 7 on the same lease is at present in the oil sand, and although it is temporarily held up with mechanical trouble at 4,534 feet, it looks good for early completion. The California Petroleum is finally listing No. 2 Hartwell as a completed well at 4,714 feet, from which depth it is pumping 345 barrels of 22.8 gravity oil daily. Immediately upon completion of this new producer the crew was shifted to No. 7 Bradford and drilling got under way within a few hours. The General Petroleum has several potential producers under way in the Richfield district, and one of them, No. 10 Thompson, is expected in momentarily. The Union also has several drilling projects nearing completion in this area, and they should appear on an early completion list. The Shell's deep test in the Brea Olinda field, No. 40 Columbia, passed the 6,600-foot level a few days ago, and although there have not been any important oil or gas showings logged up to the present time, the outlook is not altogether hopeless. It is a rather long shot, however, with the odds somewhat against the development of deep commercial production. The Shell has two other rather deep projects in this field at the present time, No. 10 Orange at 5,100 feet and No. 2-A Puente at 5,356 feet, but both are expected to pick up the deep sand. The Chicksan recompleted No. 1 Lemke after cleaning out to bottom, 4,155 feet, and it was returned to production, pumping 250 barrels of 22.3 gravity oil daily. No. 2 on the same lease staged a little blow-out while the crew was testing the shut-off on the 8⅝-inch at 4,080 feet, but the well was killed, and it should be listed for completion soon. The Chanslor-Canfield Midway Oil Co. finished No. 96 Del Amo in the Torrence Field on schedule during the early part of the week, but it only showed an initial of 92 barrels daily from 3,376 feet.

Ventura

The Shell boosted the daily production of the Ventura Avenue field 9,480 barrels during the past week by bringing in two exceptionally large wells, both of which came in under a natural flow. The company started off the week with No. 14 Edison, one of the largest wells finished in this field during the year to date, and followed up this successful completion with No. 17 Taylor a day or two later. No. 14 Edison registered an initial of 4,310 barrels of clean 30.6 gravity oil and 4,000,000 feet of wet gas daily from 6,673 feet, and it has not varied more than 50 barrels since completion. This new well, which is located in the southern part of the field and only two locations north of No. 1 Orton of the Petroleum Securities, which came in as a 4,050-barrel well six or seven months ago, is an offset to No. 17 Taylor, the Shell's other big completion during the week, which came in doing 5,170 barrels of oil and 5,000,000 feet of gas per day. No. 17 Taylor, the deepest producing well drilled by the Shell at Ventura Avenue up to the present time, is located in the river bottom in the southern part of the field about 600 feet north of the Petroleum Securities' Orton lease. These two wells indicate very clearly what the Associated and Shell could do with production if they decided to undertake a comprehensive drilling campaign at Ventura Avenue. Both companies, however, are holding back development work until a more opportune time. G. J. Magenheimer is expected to drill out No. 1 Hartman soon and make an early production test of this well, which is situated in the extreme northern part of the field. The outlook is quite favorable for satisfactory production and field reports indicate that the Associated and Bolsa Chica will undertake the immediate driling of at least one direct offset. Should No. 1 Hartman show large production the Magenheimer interests will also start work on a new well and this may result in additional drilling to prevent drainage. The Associated is experiencing considerable difficulty in completing No. 44 Lloyd, which looked rather promising for large production at 6,354 feet but it is believed that with a little further work the well will get under way. It has refused to respond, however, after several days of artificial stimulation and it may be necessary for the company to re-enter the hole. The Petroleum Securities cored a very favorable indication in No. 3 Orton in the southern part of the field at 5,435 feet and this well, together with No. 2 Orton and No. 2 Willett, should be completed soon.

Kern River

George F. Getty added another new pumping well to his list of producers on the Kern front as the result of the completion of No. 20 Lehnhardt in Section 14-28-27, which made 146 bbls. on the beam from 2,061 feet. In addition to completing this new well, Getty cemented No. 23 Tegeler and No. 23 Lehnhardt, both on top of the oil sand, and preparations are being made to bring them in within a short time. The General Petroleum is scheduled to make a production test on No. 15 Young during the course of the next few days and may possibly bring in No. 2 Sill along about the same time. The Standard has six potential producers under way in this area and since all of them are below the 2,000-foot level they should be finished between now and the end of August. The Chanslor-Canfield Midway Oil Co. spudded in No. 7 in Section 23-28-27 and landed a water string in No. 8 at 2,025 feet. Drilling in the Round Mountain Field northeast of Bakersfield in Kern County has been going along at a slow rate and while no considerable amount of work is expected some four or five additional holes should get under way within the next 30 days. Conditions in the Mount Poso area are quite similar and while the Shell will probably keep one string of tools in operation continuously the completion of these wells from time to time will not be reflected in the daily production of this field for some time as these producers are shut in immediately upon being finished. The Goleta Field in Santa Barbara County, while it yields an exceptionally high gravity oil having a gasoline content of approximately 60 per cent, will probably never become a very important factor from a production standpoint unless future drilling is more productive. The producing wells finished in this field

up to the present time have failed to hold up to anywhere near their initial and while new wells have been finished from time to time daily production has not reflected this condition as the decline in older producers has just about offset that of new completions. It must be remembered, however, that a 100-bbl. well in this field is the equivalent of a 500-bbl. producer in other areas where deeper drilling is required and the quality of oil is less favorable. The Barnsdall should make a production test of its No. 1 Edwards in this field very soon and it is thought that a very satisfactory completion will be secured. On a preliminary test this well flowed at the rate of 500 bbls. per day for a few hours before water trouble developed necessitating another cement job.

Northern California Wildcats

The Casa Loma, or Union Avenue district at Bakersfield, in Kern County, and the Seacliff area in Ventura County about 10 miles west of Ventura, continue to share the spotlight in California wildcat circles as both are potential oil fields. In the former district the Pacific Eastern Production Co. (Gulf interests) is still working in an effort to finish its wildcat as a commercial producer following several unsuccessful attempts made heretofore. This test, which blew in as a gas well several weeks ago, has been held up because of pipe trouble but corrective measures are now under way and it is possible that another production test will be made in the near future. Simultaneously with the blowing in of this well operators got busy and leased up every available piece of property with the result that the district within a radius of 5 miles has been tied up almost solid.

Most of the larger companies have secured more or less protective acreage and lease maps indicate that many smaller progressive operators are well represented. George F. Getty's lease department has been quite active and this operator, who has participated in the development of every field of recent origin, will no doubt figure prominently in future work if the area is found productive.

The coring of a 22-foot oil sand by the Pacific Eastern at Casa Loma resulted in a mad rush to secure leases in this entire section with the result that the entire southern end of the San Joaquin Valley will probably be fairly well tested out during the course of the next year. The Pacific Eastern, following the example of other operators, is securing additional acreage in all directions and recently tied up approximately 700 acres about 4 miles south of the city of Bakersfield and 2 miles away from its present Union Avenue test in the expectation of proving up what may turn out to be the extension of the Union Avenue Field. This lease is a topographical high on the Rosedale Highway opposite the Fruitvale school house and those familiar with this section believe the company has an excellent chance of developing an extension or opening up a new field. A 5,000-foot dry hole was abandoned last year just west of this particular section and drilling is to be resumed in a second well on the same lease which was suspended at approximately 1,400 feet. The trend of this southeastern movement is such that at present it appears to be headed toward the outlet of Little Sycamore Canyon just south of Bear Mountain. To the north leasing has extended as far up as Arvin where Joseph DiGiorgio of New York City has a 4 000-acre farm, which, it is understood, has recently been leased. Nash & Valencia have taken over the rig and properties of the Royal Petroleum in the Greenfield area south of Bakersfield and it is reliably reported that an early test will be made. The Shell has been rather active west of the Round Mountain Field located some 15 miles northeast of Bakersfield and at least one hole will be put down in this area soon. The Shell is apparently playing for another field between Mount Poso and Round Mountain in the so-called Mon Bluff area where the Miocene Oil Co. put up a rig several weeks ago and then suspended operations after securing an extension of time. A part of this projected wildcat work in southern Kern County will probably be done with Diesel equipment. It is impossible to utilize electrical energy entirely due to the large area covered and with water at a premium during the summer months Diesel engines will no doubt be utilized in many instances.

No further developments have taken place in the Buttonwillow area where the Milham Exploration Co. completed a large gas well a few weeks ago and conditions will probably remain in status quo for the next 30 days, during which time the Milham will make an exhaustive test for commercial gas production. This well, which was drilled in the Goose Lake district, 8 miles southwest of Wasco, is the first natural gas producer to be finished in what some regard as an immense natural gas deposit, which, however, appears to be devoid of oil. The natural gas which is characteristic of this district tests approximately 99 per cent methane, this tending to indicate that it is not an oil gas. The Milham's first test in this area, it will be recalled, was destroyed last year by a terrific blowout. The Chanslor-Canfield Midway Oil Co. encountered granite in its Delano wildcat, No. 1 Quinn, and the hole will be plugged back and several tests made on the way out. The Superior Oil Co. has mapped out a rather extensive wildcatting campaign by staking three new wells in the San Joaquin Valley during the past week or 10 days. One of these will be located in the Kettleman Hills area, while the other two will be drilled north of the present Coalinga Field.

The Chanslor-Canfield Midway Oil Co. has run into a series of mechanical troubles which have been holding up production tests of its two wildcats in the Seacliff area in Ventura County and as a result the possibilities of this section will not be determined for some time. The Pan American has taken over two leases, the State and Federal, from the Chanslor-Canfield Midway Oil Co. and actual drilling will probably get under way very soon. One of these tests taken over by the Pan American is the rig erected by the Chanslor-Canfield Midway Oil Co. along the ocean front some time ago and from a geological standpoint it appears to be very well located. No. 1 State, the well in question, is within throwing distance of the surf. The Scott Petroleum Co. is also erecting a rig in the Seacliff area, the derrick standing in Ventura County but casting its shadow across the dividing line into Monterey County.

Southern California Wildcats

The San Joaquin Valley for the first time in several years has taken the play away from southern California as far as wildcatting is concerned and for this reason there are only one or two areas in the southern part of the state which warrant more than an ordinary amount of interest. One of these is the Potrero region, which lies midway between the Rosecrans and Inglewood Fields, where the Associated has been wildcatting intermittently for the past 8 or 10 months. The Associated has started to make a test of its No. 1 Cypress in this vicinity several times but just at the psychological moment the receipt of countermanding orders prevented additional work. The company apparently has the makings of a commercial producer at Potrero but this will not be definitely determined until an actual production test has been made. The Hawthorne district, where the San Clemente Oil Co. has No. 1 Peck, a wildcat, down 3,012 feet, is being watched very closely due to the admitted presence of small quantities of oil which so far has failed to result in commercial production. The Monterey Park Oil Co. is rigging up No. 1 Browning for an early test about a half a mile from the center of the town of Monterey Park, and while this area is not generally regarded as favorable this test will no doubt be watched with interest.

SOUTHWEST TEXAS

(Continued from Page 54)

bailed dry, with slight show of oil and gas, resumed drilling and is to core at 2,537 feet. W. L. Pearson's No. 1 Rotge, Dominog Rotge tract, has derrick up.

Ina Fie'd—Medina County

Golden West Oil Co.'s No. 7 Schmidt, Survey 15, is drilling at 842 feet.

Adams Gas Field

Western Gas & Fuel Co.'s No. 1 Schmidt, Survey 71, located 2,231 feet to east line and 422 feet to south line, has set surface casing at 96 feet. Western Gas & Fuel and Witherspoon Oil Co.'s No. 3 Adams, Block 7, is rigged up. Witherspoon Oil Co.'s No. 1 Schmidt, Survey 526, located 800 feet to north line and 400 feet to east line, at 2,207 feet, is drilling in Edwards topped at 2,120 feet; No. 1 Nixon, Survey 527, at 1,500 feet to south and 200 feet to east line, is ready to spud in.

Refugio County

Houston Gulf Gas Co.'s No. 6 Shelly (formerly No. 1 Shelly), the deep test on the Morgan acreage, is at 1,800 feet; No. 4 Shelly at 2,448 feet cored, set liner and tested dry, and will pull liner and wait outcome of the No. 6. William F. Morgan's No. 2 Rose Rogers, a half mile from production, is standing at 2 510 feet, waiting on No. 6 Shelly, the deep test; No. 8 Lambert in Survey 8, north 1,000 feet from No. 1, is rigged up and standing, waiting on the deep test.

LOUISIANA-ARKANSAS

(Continued from Page 52)

has a location for No. 1 McCutcheon. Section 15-17-16. This company's No. 2 Thigpen & Herold, Section 24-18-16, is being bailed for a test of sand at 916 feet. Industrial Oil & Gas Co. has abandoned No. 1 Sharp, Section 22-18 16, after testing salt water at 2,627 feet. Magnolia Petroleum Co.'s No. 1 Bell, Section 4-17-16, is drilling lime rock at 2,580 feet. This company's No. 1 Furrh, Section 28-18-16, is being cleaned out preparatory to cementing casing at 887 feet. Standard Oil Co.'s No. 2 Trosper, Section 34-18-16, is fishing for the bit and drill collar with the hole down 3,078 feet. State Line Oil & Gas Co. is rigging up for No. 5 Thigpen & Herold, Section 26-18-16.

Bethany Oil & Gas Co.'s No. 1 Offenhauser, Section 1-20-16, is waiting on a standard rig at a total depth of 2,270 feet. Dodson and associates have started a new test, No. 6 Rives, Section 5-20-16, and have drilled to 1,865 feet where 6-inch casing has been cemented. The 10-inch surface string was cemented at 41 feet. Falcon Drilling Co.'s No. 1 Schmidt, Section 27-20-15, is drilling at 1,040 feet. Gilliam Syndicate's No. 1 Taylor, Section 17-21-14, has been completed at a depth of 914 feet pumping 4 bbls.

T. D. Gray and associates' No. 1 Hart, Section 29-21-16, is coring at 1,907 feet. Standard Oil Co. has built a derrick for No. 179 Stiles, Section 33 21-16. On the same lease is No. 188 Stiles, in which the 4½-inch liner is being set. The test has 12 feet of sand at 1,822-34 feet. The Texas Company's No. 4 Hutchinson, Section 9-15-12, is shut down at 1,933 feet. It showed salt water when tested at 1,917 feet. Woodley Petroleum Co. has started a new test in Section 11-15-12, the No. 2-B Knight. This is down 93 feet where the surface string of 10-inch pipe has been set.

LaSalle Parish

Ayres Brothers have cemented 6-inch casing at 1 505 feet in No. 5 Urania, Section 30-10-2e, Urania Field. Hope Oil & Gas Co.'s No. 4 Urania, Section 19 10-2e, is shut down at 820 feet. Bruce Hunt's No. 1 Urania, Section 7-10-2e, is at 1,505 feet where 6-inch casing has been cemented. Natural Gas & Fuel Corp.'s No. 10-M Urania, Section 19 10-2e, is pumping 90 bbls., being completed in sand at 1,573-79 feet. Wingfield and associates' No. 2 Gibson, Section 2-9-1e, tested salt water and is shut down waiting orders at 1,516 feet. Zoder and associates' No. 4, Section 7-10-2e, has 10-inch surface pipe cemented at 100 feet.

Monroe District

Falcon Drilling Co.'s No. 1 Gladney, Section 5-21-7e, Morehouse Parish, is drilling at 2,775 feet. W. C. Feazel's No. 1 Faulk, Section 15-20-4e, is drilling at 1,220 feet. Natural Gas Producing Co.'s No. 20 Crossett, Section 21-23-7e, is drilling at 3,170 feet. The Texas Company's No. 1 Sidney, Section 22-20-6e, is in rock at 1,820 feet.

In Ouachita Parish, J. S. Gould's No. 1 Grayling, Section 11-15-2e, is drilling at 600 feet. Industrial Gas Co. has cemented 8-inch casing at 872 feet in No. 1 Sullivan, Section 5-18-4e. Ladell Properties, Inc., is drilling at 1,230 feet in No. 43 fee, Section 31-20-5e. Ouachita Gas Co. has cemented 8-inch casing at 806 feet in No. 4 Lieber, Section 3-19-4e.

Interstate Natural Gas Co. has a rig up for No. 1 Parks, Section 23-20-3e, Union Parish. The derrick for this test has been completed since early in March. Natural Gas Producing Co. has started another test, No. 3 Peak, Section 5-20-4e, and is down 75 feet. Southern Carbon Co.'s No. 1 Jackson, Section 20-20-4e, is drilling at 600 feet.

Webster Parish

Magnolia Petroleum Co. has cemented 10¾-inch casing at 410 feet in No. 2 Branton, Section 6-22-10. This company's No. 3 Cox, Section 23-21-10, Cotton Valley deep test, is drilling lime at 3,941 feet. Magnolia Petroleum Co.'s No. 4 Marshall, Section 21-21-10, Cotton Valley, is down 843 feet where 10¾-inch casing has been cemented. Ohio Oil Co. has completed No. 4 Bank of Cotton Valley, Section 22-21-10, its Cotton Valley deep test, producing 7 808,000 feet of gas from a depth of 4,595 feet. Rock pressure is 1,775 feet. This company has a rig up for No. 4 Holloway, Section 23. Woodley Petroleum Co.'s No. 1-B Cox, Section 23, is drilling anyhydrite at 4,152 feet.

ARKANSAS

Smackover Field
(Union and Ouachita Counties)

In the Norphlet area, E. M. Jones has started operations in No. 11 Murphy, Section 17-16-15, and is down 152 feet where his first string of casing has been cemented. Lion Oil & Refining Co. has cemented 6⅝-inch casing at 2,350 feet in No. 6 Hays, Section 4-16-15. Magnolia Petroleum Co. is arranging to mill out casing at 2,730 feet in No. 7 Wilson, Section 17-16-15. Natural Gas & Fuel Corp. has a location for another test, No. 3-B Hill, Section 5-16-15. This company also got a new well in No. 4-C Lawton, Section 10-16-15, which was completed pumping 125 bbls. of fluid, 65 per cent salt water, from a depth of 2,436 feet. Ohio Oil Co. has abandoned No. 5 Murphy, Section 9-16-15, after drilling to a depth of 2,883 feet. Southern Crude Oil Purchasing Co. has plugged back in No. 5-A Wells, Section 15-16-15, to the 2,594-foot level and is waiting on cement to set. The hole was drilled to 2,675 feet where it tested salt water. Sun Oil Co. has abandoned No. 3 Hays, Section 3-16-15, at a depth of 2,275 feet. Unity Petroleum Co. is coring at 2,652 feet in No. 12 Roper, also in Section 3. On the Ouachita County side of the field, Exchange Oil Co. has completed No. 8 Berg, Section 4-16-15, pumping 6 bbls. of oil and 294 bbls. of salt water from sand at 2,356 feet. Marine Oil Co. has a rig up for No. 14 Snyder, Section 34-15-15. Owenwood Oil Corp. is going to deepen No. 7 Snyder, also Section 34, and has cemented the bottom of the hole at 2,376 feet. This test formerly was completed flowing 1,000 bbls. of oil in June, 1925. Phillips Petroleum Co. has a well flowing 12,000,000 feet of dry gas with a rock pressure of 285 pounds in No. 15 Joyce, Section 33-15-15. It was completed in sand at a total depth of 2,667 feet. Sam Richardson has cemented a short string of 5 3-16 inch casing at 1,999 feet in No. 2 Rhoten, Section 32. Sunny Jim Oil Co. tested salt water in No. 15 Berry, Section 33, and is arranging to recement casing. This test is down 2,367 feet.

In the Louann sector of Smackover in Union County, Smitherman & McDonald are drilling at 2,150 feet in No. 4-B Saxon, Section 5-16-16. On the Ouachita County side, F. A. Book is setting a short string of 4½-inch casing at 2,280 feet in No. 3 Johnette, Section 33-15-16.

Stephens District

Magnolia Petroleum Co. has abandoned No. 1 Morgan, Section 7-15-19, after drilling to 3,030 feet. The only other drilling

ANNOUNCING

The Opening of Two New Stores in Oklahoma

AT

EARLSBORO and LOVELL

At these points, a full line of Oil Well Supplies will be carried

INTERNATIONAL SUPPLY CO.

TULSA INTERNATIONAL ISCo SUPPLY COMPANY OKLA.

C-M Matchless Derrick Cranes

for More Work With Less Effort

SEE a Matchless Derrick Crane in action! Watch it handle heavy tools and other weighty objects! Note how quickly and easily one man, the operator, does MORE WORK with LESS EFFORT than could possibly be done by a half dozen men.

"Don't envy the owner of a Matchless Derrick Crane. See your jobber and get one!" Accurately and ruggedly built to stand the gaff of continuous service, Matchless Derrick Cranes represent 100% value for every dollar of their cost.

Sold by Leading Jobbers in Your Territory

THE CHISHOLM-MOORE MANUFACTURING CO., Cleveland, Ohio

Branches in New York, Chicago, Pittsburgh
Distributors Everywhere for Prompt and Efficient Service

CHISHOLM-MOORE
OVERHEAD HOISTS CRANES TROLLEYS TRACK SYSTEMS

Matchless Derrick Cranes, fitted with the famous "C-M" Matchless Trolleys and "Cyclone" Hoists, make the greatest combination of oil field material handlers it is possible to obtain.

ROOTS

Gas Pumps Save Power!

THAT Roots Gas Pumps are the most economical units for boosting and exhausting is no idle boast. Service records have proven their efficiency too often.

The Reasons?

1. Extremely low friction loss.
2. Almost "straight line" path for the gas. There are no valves or restricted passages to increase fluid friction.
3. No abrupt change in efficiency at speeds slower or faster than rating.

Investigate Roots Gas Pumps before you buy new equipment. They're a good investment.

Ask for Bulletins

Nos. 1071 and 1081

The P. H. & F. M. ROOTS CO.
CHICAGO Peoples Gas Building
CONNERSVILLE, INDIANA
NEW YORK 120 Liberty Street

ROOTS

Kreicker

test in the district is Buffalo Oil Co.'s No. 3 Culp, Section 22-15-19, which still is fishing for the core barrel at 1,512 feet.

Nevada County

Autrey Oil Co. has 500 feet of oil in the hole from sand at 1,180-89 feet in No. 2-A Martin, Section 6-14-20, and is waiting on a pumping rig. This company also has a derrick up for another test on this lease, No. 3-A Burnham and associates have abandoned as dry No. 1 Miller, Section 12-15-22, after drilling to 1,348 feet. This is southwest of the Irma Field. J. J. O'Brien has cemented 6-inch casing at 1,183 feet in his No. 1 Haynie, Section 1-14-21. This operator also got two more good wells in No. 2 Martin, Section 6-14-20, and No. 2-B Moss, Section 1-14-21. The former is pumping 100 bbls. of oil from sand at 1,194-99 feet, and the latter is pumping 225 bbls. from sand at 1,159-65 feet. His No. 3-B Moss, Section 1-14-21, is down 1,167 feet where 6-inch casing has been cemented, and a derrick is up for No. 4-B Moss.

KANSAS FIELDS

(Continued from Page 57)

and others made location for No. 2 Taylor, SE cor. NE NW, Section 7-27-12.

Rogers and others' No. 1 Townlot, NW cor. NE NW, Section 2-26-10, had sand 2,030-35 feet, plugged back to 2,030 feet and was completed for 150 bbls.

McPherson County

Lamar and others made location for No. 1 Lamar, SW cor., Section 1-17-3w.

Marion County

Frank, Propp and others' No. 1 Buckley, SE cor. SW, Section 18-19-4, is dry and abandoned at 2,671 feet. Empire Gas & Fuel Co.'s No. 1 Ely, NW cor. NE SW, Section 36-20-3, is dry at 2,700 feet.

Mead County

Blackwell Oil & Gas Co.'s No. 1 Lilly, C SE, Section 9-33-28w is spudding.

Rooks County

Derby Oil Co. has built the rig for No. 1 Kruse NE cor. NW NE, Section 3-10-16w.

Seward County

Vickers Petroleum Co.'s No. 1 Hitch, C SW, Section 33-32-34w, is dry and abandoned at 4,037 feet.

Sumner County

Roxana Petroleum Co. made location for No. 4 Wiles, NW cor., NE NE, Section 25-31-2. No. 4 Shore, NW cor. SW, Section 25-31-2, is drilling at 280 feet. Shawver and others made location for No. 1 Oxford, townsite Lot 8, Block 85, Section 11-32-2. Roxana Petroleum Corp. made location for No. 1 Buffington, Midland Railway right of way, Oxford townsite, Section 14-32-2.

Woodson County

Pure Oil Co. abandoned No. 1 Otto, NE cor. NW NW, Section 21-23-14.

LA.-ARK. WILDCATS

(Continued from Page 52)

son. Its No. 1 Rogers, Section 21, is near the gas sand, with 8½-inch casing set at 3,086 feet. The Texas Company also has a test on the gas sand in Section 27. This is No. 1 Mays, with 6⅝-inch casing cemented at 3,087 feet. In Section 36, this company is building a derrick for No. 1 Wilkerson. Woodley & Collins' No. 1 on the M. A. Farrington farm, Section 22, is drilling at 2,734 feet. It topped the Blossom sand at 2,692 feet. These operators' No. 1 on the J. S. Farrington farm, Section 23, is drilling at 2,570 feet. Their No. 1 Matlock, Section 23, is drilling at 2,688 feet, after topping the Blossom at 2,680 feet.

In the Sligo district, Sligo Syndicate's No. 1 Jeter, Section 23-17-12, is having a standard rig built and a separator installed. Its production from a depth of 4,272 feet is estimated at 2,000,000 feet of gas and 20 bbls. of oil.

Catahoula Parish

Lochnager Oil & Gas Co.'s No. 1 Beasley, Section 26-9-6e, caused a sensation when it blew in at a total depth of 3,093 feet and for 30 minutes produced at the rate of more than 30,000,000 feet of gas. However, it bridged over and then filled with salt water. The bottom of the hole will be cemented and a new test drilled. This test originally blew out last February. The gas was killed and casing cemented, but the test was shut down because of high water until the first of this month, when the plug was drilled. It tested salt water at 2,700 feet, but the hole was reamed down to 2,950 feet. The test was shut down, waiting orders, when it blew in.

Claiborne Parish

Magnolia Petroleum Co.'s No. 1 Lee, Section 16-22-8, is drilling brown lime at 4,005 feet.

DeSoto Parish

Clark & Melat have set 6-inch casing at 2,545 feet in No. 2 Payne, Section 12-11-16. Total depth is 2,550 feet. Dixie Oil Co.'s deep test, No. 1 Jenkins, Section 9-12-11, is drilling at 5,470 feet in lime. The Texas Co.'s No. C-15 Sample, Section 36-13-12, is in a sand showing gas at 2,547 feet.

Franklin Parish

Barbour Oil Co.'s No. 1 Baker, Section 3-15-7e, is drilling gumbo at 2,960 feet. Cowell and associates' No. 2 Moore, Section 12-11-6e, blew out while drilling at 1,385 feet, making an estimated 10,000,000 feet of gas and 20,000 bbls. of salt water, and caught fire. The only casing in the hole is the 15½-inch surface string at 120 feet. The blowout is reported from sand at 701-34 feet.

Grant Parish

Holmes and associates' No. 2 Fee, Section 17-9-1e, is shut down at 1,632 feet. Swope and associates' No. 4 Fee, Section 18-9-1e, is shut down at 1,460 feet.

LaSalle Parish

Tunica Petroleum Co.'s No. 35 L & A., Section 9-7-2e, has been completed in sand at 782 feet, pumping 15 bbls. of water and 1 bbl. of oil.

Natchitoches Parish

Lawson & Pharris are building a derrick for No. 2 Clark & Morse Lbr. Co., Section 3-5n-6w. Ohio Oil Co. is arranging to test a sand at 2,500 feet in No. 2 L. & A., Section 26-13-6w.

Red River Parish

A. S. Askew has staked a location for No. 1 Richardson, Section 25-13-11. The Texas Company is waiting on 6-inch casing for No. 36-B Brinkerhoff, Section 30-13-10. This test is down is down 2,502 feet.

Richland Parish

Gulf Refining Co. has a rig up for No. 2 Marshfield, Section 29-17-6e. This company's No. 1 Ouachita National Bank, Section 25-17-5e, is drilling gummy shale at 1,480 feet. No. 1 Wayne, Section 36-17-5e, has been completed in the gas sand at 2,450 feet, after being plugged back from a total depth of 3,052 feet. It gauges 212,544 feet daily. Moody & Seagraves have set 15½-inch casing at 160 feet in No. 1 Hemler, Section 20-16-6e. These operators also have started No. 1 McCoy, Section 32-16-6e, and are down past 50 feet. Ruston Drilling Co. is shut down at 2,304 feet after drilling out the 6-inch plug at 2,300 feet in No. 1 McCoy, Section 30-16-6e. This company's No. 2 McCoy, Section 8-16-6e, is drilling shale at 1,500 feet. Texas-Louisiana Carbon Co.'s No. 1 Broughton, Section 1-15-6e, is being washed to the bottom at 2,602 feet. It has been shut down since the latter part of April.

Sabine Parish

Arkansas Fuel Oil Co. has completed No. 9 Logan, Section 33-10-12, flowing 37 bbls. from a total depth of 3,385 feet. This company's No. 10 Logan, Section 32-10-13, is drilling hard lime at 3,881 feet. A derrick has been built for No. 11 Logan, Section 33-10-12. Arkansas Fuel Oil Co.'s No. 1-A Logan, Section 32-10-13, is down 3,025 feet, where 6⅝-inch casing has been cemented. Foster and associates also have cemented 6⅝-inch casing at 3,065 feet in No. 1 Nabors, Section 30-10-12. Magnolia Petroleum Co.'s No. 2 Hall, Section 33-10-12, is drilling shale at 135 feet. This company's No. 1 Rembert, Section 32-10-12, cored hard sand, lime and shale at 3,188 feet. Moffett and associates are drilling at 750 feet in their second test on the Moore farm, Section 5-9-12. H. P. Tate is drilling at 2,980 feet in No. 1 Cook Land Co., Section 23-10-11.

Webster Parish

Shreveport-El Dorado Pipe Line Co.'s No. 1 Gamble, Section 23-20-8, is drilling rock at 2,420 feet.

West Carroll Parish

Palmer Corp.'s No. 1 Pioneer Cooperage Co., Section 16-20-10e, is drilling shale and boulders at 2,175 feet.

Winn Parish

Ohio Oil Co. is mudding up in No. 1 Rolen, Section 9-12-1w. Total depth of the hole is 852 feet.

ARKANSAS

Union County

W. R. Keever's No. 2 Ezell, Section 12-17-15, is drilling ahead at 2,900 feet after testing salt water at 2,885 feet. Magnolia Petroleum Co.'s No. 1 Caroll, Section 1-17-14, is drilling rock at 1,740 feet. Mazda Oil Corp.'s No. 1 Boyd, Section 9-17-15, is shut down at 2,041 feet. Ohio Oil Co. has a rig up for No. 2 Crain, Section 1-17-14. Owenwood Oil Corp.'s No. 1 Goode, Section 31-16-13, is drilling at 2,530 feet. Rice and associates are drilling at 2,456 feet in No. 1 Newton, Section 13-17-16.

Ouachita County

Magnolia Petroleum Co.'s No. 1-B Stout, Section 28-14-16, tested dry in 5 feet of sand at 2,209-14 feet. Moody Oil Corp. has a location for No. 1 Bacon, Section 12-11-18, in the extreme northern part of the county.

Ashley County

Glassell and associates' No. 1 Keller, Section 10-19-5, has been shut down at 1,906 feet. Arkansas Fuel Oil Co. is drilling at 3,306 feet in No. 1 Arkansas Timber and Land Co., Section 25.

Bradley County

Arkansas Fuel Oil Co. is drilling at 3,306 feet in No. 1 Arkansas Timber and Land Co., Section 25-16-12.

Columbia County

Tunica Petroleum Co. is drilling shale at 2,600 feet in No. 1 Bodcau, Section 27-19-23.

GULF COAST FIELDS

(Continued from Page 57)

feet. No. 2 Bell is rigging. No. 1 Randon is shut down.

Clemens Dome: Roxana Petroleum Corp.'s No. 2-A Pabst is drilling around 6,165 feet.

Stratton Ridge Dome: Pure Oil-Humphreys Corp.'s joint No. 1 Armstrong is rotating below 4,400 feet. The Associated Oil Co.'s No. 1 Seaburn is at 4,185 feet.

Harris County

Hockley Dome: Humble Oil & Refining Co.-Marland Oil Co.'s joint No. 1 Warren is taking a core at 3,825 feet. Tests being drilled by Dr. P. S. Griffith, north of Houston and by the Juniata Oil Co. north of Cypress, are both shut down. Brain and others have a location south of Tom Ball.

Matagorda County

Hawkinsville Dome: Gulf Production Co.'s No. 3 Sanborn is drilling around 4,410 feet. The Matagorda County Development Co.'s No. 1 Hawkins near Bay City, is rotating below 1,400 feet.

Fort Bend County

Long Point Dome: Gulf Production Co.'s No. 4 Trone on the west flank is drilling around 900 feet. Its No. 4-A Beard is at 856 feet. A location has been made for No. 4 Wolfe.

Shelby County

W. M. Sebastian's No. 1 Pickering is around 2,365 feet. Magnolia Petroleum Co.'s No. 1 Pickering is at 2,630 feet.

Nacogdoches County

Stein & Lewis' No. 1 Birdwell is shut down at 1,100 feet.

Week-End Completions

New production to the amount of 4,100 bbls. was added to the total when late in the week the Yount Lee Oil Co. completed No. 37 McFaddin, at Spindletop, at 5,200 feet with initial flow of 1,500 bbls. The Gulf Production Co. followed with No. 11 Oakwood there, flowing 2,600 bbls, 3 per cent water, at 4,850 feet.

These wells make a total of 17 completions and 8,890 bbls. new output for the week.

COASTAL LOUISIANA

Cameron Parish

Sweet Lake: Pure Oil Co's. No. 4 is in a sand at 5,145 feet that shows oil and gas. No. 5 will be deepened from 4,500 feet. The Louisiana Land & Exploration Co's. No. 2 in Mallard Bay is drilling around 3,100 feet. No. 1 in Sabine Lake is shut down at 3,335 feet.

Ascension Parish

Sorrento Dome: Gulf Refining Co's. No. 2 United Lands, is drilling around 1,735 feet in cap rock.

Iberia Parish

Eagle Point Dome: The Gulf Refining Co's. No. 2-Z state land, and Calcasieu Oil Co's. No. 1-A Schwing, both shut down. The Louisiana Land & Exploration Co's. No. 1 in Vermillion Bay is at 3,087 feet.

St. Mary Parish

Louisiana Land & Exploration Co's. No. 1 Grand Lake, is drilling below 4,600 feet. No. 1 West Cote Blache, will resume drilling soon.

Operations in the Pools

In the Markham Pool, the Rycade Petroleum Corp.-Houston Gulf Gas Co's. No. 2 Sisk, is drilling around 1,405 feet.

The Texas-Gulf Sulphur Co. is starting six tests on the dome at Boling. The Sun Oil Co's. No. 2 Farmer, on the northeast flank is shut down. No. 3 Farmer, is drilling at 2,615 feet in shale. Its No. 1 Karpek, is around 615 feet.

In the Big Creek Pool in Fort Bend County, Gulf Production Co's. No. 26 Davis, is drilling deeper at 3,675 feet and No. 42 Davis is drilling around 3,235 feet. The Texas Company's No. 2 Wheat is around 1,100 feet.

At Blue Ridge, Gulf Co's. No. 15-C Blakely is below 3,186 feet. No. 10-B Blakely is around 2,876 feet. The Navarro Oil Co's. No. 2-A Robinson is at 3,485 feet. No. 3-A Robinson is below 3,545 feet and No. 3-B Robinson is rigging. Abercrombie & Co's. No. 3 Robinson is drilling at about 3,090 feet. No. 3 West-Schenck is at 3,875 feet. The Cunningham Production Co's. No. 1 Blakely is below 1,575 feet.

The Rio Bravo Oil Co's. No. 8 Settegast at Pierce Junction is at 3,775 feet with a location for No. 6-A. The Gulf Co's. No. 3-A Jones is drilling around 4,135 feet. The Moody Oil Co's. No. 1 Hume is drilling at 4,495 feet. The Leonard Petroleum Co. of Pittsburgh, Pa. No. 1 Gilmore is around 3,890 feet. J. F. Bashara is drilling No. 1 fee deeper from 4,450 feet. Anderson & Plummer's No. 1 Whitehead is working over with a location for No. 2 Whitehead. Lee & Woodward's No. 3 Settegast is drilling at 3,150 feet. A location has been made for Marland Oil Co's. No. 5 Prudential.

In the Goose Creek Pool, the Humble Oil & Refining Co's. No. 71 Smith is at 4,970 feet and No. 72 is around 4,100 feet. Gulf Co's. No. 14 Chapman-Bryan is deepening at 4,765 feet. No. 26 Smith is around 3,980 feet. The Port Oil Co. will deepen No. 1 Adey, as will the Powell Oil Co. No. 6 Bryan. The Southern Exploration Co's. No. 7 Freeman is deepening at 2,900 feet. A derrick is up for Wilson and others' No. 8 Busch.

The Humble Oil & Refining Co's. No. 1 Kirby on the east side at Barber Hill is drilling below 5,700 feet. It is the deepest hole to date, there. Bennett Production Co's. No. 1 Kirby is idle at 4,950 feet.

Hardin County

The Cove Oil & Gas Co's. No. 1 Cotton, at Saratoga, is around 900 feet.

The Orange Petroleum Co. is working over No. 3 Merchant on the southwest side at Sour Lake at 4,080 feet.

The Texas Company's No. 1 Sterling, a proposed deep test on the northwest side of the Batson Pool, is drilling ahead at 3,300 feet. The Deutser Oil Co's. No. 2 Colorado is around 700 feet. J. H. Everett's No. 1 King is drilling at 1,309 feet. Charles Hooks is rigging No. 1 La Jarza on the east side of the pool.

In the Hull Pool, the Gulf Co's No. 21 Baldwin is at 3,245 feet. No. 61 Phoenix is deepening at 2,600 feet. The Empire Gas & Fuel Co's. No. 26 Barngrover is at 3,409 feet. The Hull Oil Co's. No. 13 Abel is drilling at 910 feet and Big Dome Oil Co's. No. 3 Palmer at 985 feet. The Texas Company's No. 3 Taylor is at 3,435 feet. The Republic Production Co. is deepening Nos. 26 and 100 Dolbear.

The Sinclair Oil & Gas Co. is rigging to deepen No. 4 Granger, in the Orange Pool. The Brownie Babbittee Oil Co's. No. 5 McLean is working over at 3,685

feet. The Texhoma Oil Co's. No. 16 Chesson is drilling at 3,465 feet.

The Texas Company's No. 83 Hogg, at West Columbia, is drilling at 2,684 feet.

Spindletop

The Sun Oil Co. is drilling Nos. 12, 14, 15 and 1 Price. The latter is around 6,170 feet. The others are all below 5,200 feet. The Magnolia Petroleum Co. is drilling Nos. 3, 5 and 6 fee, all below 5,350 feet. Its No. 2 Tank Farm is at 3,980 feet. The Gulf Production Co's. No. 12 Oakwood is at 5,110 feet in the second hole. No. 8 Mann is at 4,180 feet. No. 3 McLean is drilling deeper at 4,186 feet. No. 224 Gladys in the old cap rock area is at 719 feet. J. O. Davis' No. 2 Gladys is at 3,845 feet. George White's No. 3 Rush is at 4,345 feet. The Hines Oil Co's. No. 1 Weed is at 4,655 feet. The Rio Bravo Oil Co's. No. 3 T. & N. O. is at 3,900 feet, working over, and No. 55 will be drilled deeper. The Plummer Oil Co. has a location for No. 1 Quinn.

South Louisiana Pools

The Gulf Refining Co. is drilling No. 5 Lutcher and No. 1 Industrial Lumber Co. lands in the Stark Pool, northeast of Orange.

In the Edgerly Pool, Gulf Refining Co's. No. 42 Bright-Penn is at 3,825 feet and No. 43 is below 3,265 feet. The Rex Petroleum Co's. No. 5 Hunter is shut down at 4,000 feet. No. 7 Hunter is at 1,655 feet. McDaniel & Ellis' No. 1 Ecker is at 3,643 feet. The Hercules Oil Co's No. 1 Paraffine is at 3,345 feet. Wilson & Broach's No. 4 Wilson is at 2,345 feet.

In the Vinton Pool, the Gulf Refining Co's. No. 5 Gray is deepening at 2,415 feet. The Vinton Petroleum Co's. No. 20 Vincent is drilling around 2,985 feet. A location has been made for No. 60 Gray. Marrs McLean has a derrick up for No. 12 Gray.

The Vacuum Oil-Gulf Refining Co's. joint No. 17 Miller in the Lockport Pool is at 3,875 feet with a fishing job on hand. No. 12 Miller is also deepening and fishing at 3,700 feet and No. 18 Miller is at 3,185 feet. No. 8 Miller is deepening at 4,450 feet, and No. 9 is doing the same at 4,400 feet. No. 2 Bordages is deepening at 4,200 feet and No. 5 Bordages is drilling at 1,935 feet. No. 2 Friedberg & Wolf is fishing. No. 5 Farquhar is drilling around 5,500 feet. No. 1 fee is rigging.

In the Jennings Pool, Gulf Refining Co's. No. 1 Lockelt is drilling at 1,835 feet. The Yount Lee Oil Co's. No. 1 Latrielle is at 2,314 feet. The Texas Company is rigging No. 2 Rayne.

ROCKY MOUNTAIN AREA

(Continued from Page 59)

ductive area of the Moffat Pool in the Dakota has been determined by the drill following several edge failures a few months ago. Production has been declining due to the lack of flush production to boost the runs, and the pool probably has reached the apex of production unless the Sundance is found saturated.

The Two Creek Dome in Routt County has one Sundance sand test drilling in the Texas Production Co.'s No. 2 Belle Dennis, which is bottomed at 3,676 feet, in the Dakota formation, where it is drilling up an underreamer lug. The two Sundance sand tests on the Rangely Dome in Rio Blanco County have shown no important changes from last week. The Texas Production Co.'s No. 2 Emerald, Section 31-2n-102, which was making 12,000,000 to 15,000,000 feet of gas from the Morrison at 3,565 feet, will be drilled on if possible. Attempts to establish circulation back of the 4¾-inch pipe so that it may be lowered are now in progress. The Sundance is expected in less than 200 feet from the present bottom. The Midwest Refining Co.'s No. 2 Rangely, Section 30-2-102, is still bottomed in the Dakota formation at 3,037 feet, and is redrilling at 2,652 feet.

Still Drilling in Salt

The only other wildcat on the western slope of the mountain range at an interesting stage is the General Petroleum Corp.'s No. 2 Wilcox, Section 4-47-19, in the Paradox Valley, in Montrose County, near the Utah line. It is drilling in salt at 5,475 feet. The bit has been working in salt most of the time for many weeks. The conditions are very similar to those on the Colorado River structure south of Moab, Utah. This is the only one of the salt dome tests drilled with a rotary. Several objects are in view in continuing operations. The thickness of the salt beds may be determined, or it may be found that structural conditions may exist below the salt with some hope for encountering production. Anyway, drilling is continuing to see what may be found.

The Continental Oil Co. has a 20-bbl. pumper in its No. 1 Rogers, NW Section 2-19-70, Fremont County. This is in what is known as the Four-Mile, or West Extension, of the old Florence Pool, the second oldest producing field in the United States. This area, which lies between Florence and Canon City, has been the scene of extensive drilling for the past year, but the Continental has the cream of the acreage. The wells produce from the shale, the same as in the Florence Pool, at varying depths. Some of these wells have averaged as high as 200 bbls. a day over a considerable period. No. 1 Rogers was completed at 1,555 feet. The Continental has three other wells drilling in that area.

The Ohio Oil Co. is skidding the rig at its No. 1 Kuykendall, NE SE Section 22-12-100, Hiawatha Dome, Moffat County, and junking the old hole at 1,250 feet. This well is on the same section as the W. T. Morris well which came in last fall with a flow of 57,000,000 feet of gas from a depth of 2,270 feet.

C. Frost Liggett's No. 1 Liggett, Section 12-23-50, Bent County, 18 miles west of the town of Lamar, is drilling at 3,000 feet. This is the deepest drilling wildcat in the southeastern part of the state. The Parker Club's No. 1 Adams, Section 32-34-56, Las Animas County, is in red sandy shale at 1,828 feet. The 10-inch was set in lime shale at around 1,722 feet.

The Mojada Oil & Gas Co. has completed a 50-bbl. well in shale on Section 21-20-69, south extension of the Florence Pool, in Fremont County.

New Mexico

A report from the Hospah district in McKinley County, New Mexico, says that the Williams-Staplin's No. 1 Pettitt, SW SW Section 30-18-8, had cut a 140-foot sand at 1,835-1,975 feet in the Mesa Verde formation, showing for about 250 bbls. Confirmation by scouts has not yet been secured. The well is located about a mile northeast of the Midwest wells. The reports state that no analysis of the oil has been made, but that it appears to be about 35 to 40 degrees Baume. If the report proves to be true, it means that there has been a considerable thickening of the sand between the discovery well and the No. 1 Pettitt. The sand is thought to correlate with that found in the Midwest's No. 1 Hancock which tested 244 bbls. in 24 hours from sand at 1,531-56 feet. The Williams-Staplin well had water just before going into the oil sand, and several weeks were spent in making a shutoff. Last week it was reported that this had been accomplished.

Midwest Refining Co.'s No. 1 Hancock, NW Section 1-17-9, the discovery well, is bottomed at 2,945 feet and is setting the 6¼-inch casing. After going through the oil sand, it has had several strata of water. The same company's No. 34, SW Section 36-18-9, which showed for 50 bbls. at 1,606-12 feet, is running 6¼-inch casing and will be drilled deeper. Producers & Refiners Corp. is abandoning its No. 1 Santa Fe, Section 25-18-9, at 1,945 feet. It found water in what is now called the Hospah sand, a horizon in the Mesa Verde formation. Continental Oil Co.'s No. 1 Carcia, SW Section 9-17-7, is drilling below 210 feet. Ohio Oil Co.'s No. 1 Yontz, Section 18-16-9, is reported shut down at 1,380 feet waiting for material.

Southeastern New Mexico

In the southeastern part of the state, operations reveal little out of the routine. The Texas Production Co.'s No. 1 Robinson, Section 25-16-31, Eddy County, is proving somewhat of a disappointment at 3,885 feet. With 600 pounds back pressure on the separator, it filled with oil, but looks like it will make only 12 bbls. Same company's No. 1 Wilson, SW Section 29-17-18, Dunken Dome, in Chaves County, is drilling in brown sandy lime at 4,450 feet. It showed for about 500,000 feet of gas at 4,390 feet. No. 1 Rhodes, NW Section 22-26-37, Lea County, is drilling at 3,040 feet. The 10-inch was landed at 2,693 feet.

The Pueblo Oil Co. has made a location in the NE C NW Section 1-17s-31e, Eddy County. Ohio Oil Co.'s No. 1 Sam Wells, SW SE Section 24-7-29, Quay County, is shut down at 3,520 feet to set the 6⅝-inch casing and repair rig. Texas Production Co.'s No. 1 Jackson, SE C Section 4-20-34, Lea County, topped the salt at 1,540 feet. Total depth is 1,550 feet and the 10-inch at 1,350 feet is being underreamed to lower. Maljamar Oil & Gas Co.'s No. 1 Beardsley, NE NE Section 15-17-32, Lea County, is in the red beds at 750 feet. The 12½-inch was set at 500 feet. Cap Rock Oil & Gas Co.'s No. 1 State, SE SW Section 11-16-32, had a show of oil at 4,620-30 feet in dark gray sand and dolomite, and is drilling at 4,660 feet. Skelly Oil Co.'s No. 1 Beulah Lynch, NE C Section 22-17-31, Lea County, is circulating. Total depth 4,260 feet. Operators Oil Co.'s No. 16 State, Section 35-17-28, had a show of oil at 2,104 feet, and is drilling at 2,200 feet. Inglefield & Bridges' No. 1, Section 4-17-34, Lea County, is running 6¼-inch casing. Total depth 4,876 feet. Navajo Oil Co.'s No. 1 Goard, NE NE Section 10-3-17, Vaughn Dome, in Guadalupe County, is reported drilling in sand at 1,950 feet.

J. R. Thomas and associates are starting a test on the Tate structure, 20 miles southwest of Clayton, in Union County, on Section 27-24-33. The Ohio Oil Co. is reported preparing to drill a test on the Stony Butte Dome, 40 miles south of Farmington, in San Juan County. Huerfano Oil Co.'s No. 1 Wiltbank, Section 25-29-11, San Juan County, reported a show of oil in shale at 617 feet. The Mid-Continent Oil Co.'s No. 1 Ransom, Section 14-29-11, San Juan County, which showed for a 10-bbl. well at 990 feet, failed to come up to expectations when put on the pump, and will be drilled deeper.

Utah

The Union Oil Co. of California's No. 1 State, C NW Section 16-30s-25e, on the Lisbon Dome in San Juan County, had another show of gas the past week at 2,693 feet. The tools were blown up the hole 125 feet where they lodged and caused the hole to bridge. They have been recovered and the bridge is now being drilled out. The gas was found after going through a lime shell and there are indications that it came from a sand, but whether this is another thin stratum similar to that found at 2,565 feet remains to be determined. The stratum at 2,565 feet was only 4 feet thick and was between beds of salt. The oil which had risen 250 feet in the hole was soon bailed down. A core will be taken in the new horizon as soon as the hole is cleaned to bottom. While these showings are encouraging, they are not very different from those found in the Colorado River structures tests to the northwest.

Midwest Refining Co.'s No. 1 Hughes, SW Section 30-24-19, Elk Ridge Dome, is in hard gray lime at 3,340 feet. The Texas Production Co.'s No. 1 Shipley, Section 5-27-14, on the Sweetwater structure, to the west of the Colorado River area, is trying to straighten a crooked hole and is redrilling at 210 feet. Utah Southern Oil Co.'s No. 1 Canyon, Section 28-14-19, East Anticline, San Juan County, is bottomed at 1,310 feet in a 5-inch hole. It has been decided to complete the well with a diamond drill and equipment is being moved in under a contract to carry the hole to 2,500 feet. This test, which has been drilling for a long time, has had numerous shows of gas in the upper Pennsylvanian, the total probably aggregating more than 30,000,000 feet of noninflammable gas. The well is much higher geologically than the Colorado River structures, but due to the absence of the thick beds of salt found to the north, the drilling to the lower Pennsylvanian is much shallower. Same company's No. 1 Noble, Section 28-40-18, Cedar Mesa Dome, San Juan County, is drilling in sand at 3,430 feet. It has had 80 feet of sand showing a little water. This is a joint operation with the Utah Oil Refining Co. and the General Petroleum Corp.

The Crystal Carbon Co. has an immense gas well on the Cisco fold, in Grand County, just west of the Colorado line, which caught fire this week. Details are meager as the company's operations are handled directly from Charleston, W Va., but as far as can be learned, it is the biggest gasser drilled on the structure. This operation was started several years ago by the Utah Oil Refining Co. and the discovery well made 90,000,000 feet at the start. There were several other tests drilled and the structure was proven to be a gas dome. The operation was sold to the Crystal Carbon Co., a subsidiary of the United Carbon Co., which erected a carbon black plant that now is in operation. The new well has been running wild for several weeks.

The Embar Oil Co.'s No. 1 Big Six, Section 34-25-21, Moab Dome, is drilling in black limey shale at 4,110 feet, the horizon carrying a little gas. This well, which was the pioneer in that district, and yielded the first information concerning the subsurface geology, is down to a 3-inch hole.

The Diamond Oil Co.'s test on Section 3-9-42, Utah County, has been unable to make much progress lately on account of the reduced size of the hole. A diamond drill is being substituted for cable tools and the company hopes to make faster progress. It is bottomed at around 2,140 feet.

The Armstrong Co.'s test on Section 27-21-19, Crescent Dome, is being abandoned at 1,320 feet. It was drilled with a rotary, the purpose being to make a test not only for oil but potash. It is not far from the Crescent Eagle Oil Co. well on the same structure which has reported shows of oil, gas and water, and has caused the scouts to hurry to the location more than once to investigate rumors in the four or five years it has been drilling. This well is idle at present at 4,000 feet.

Montana

In the Sunburst Field, the Ohio Oil

(Continued on Page 147)

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Imports of crude and refined oils at the principal United States ports for the week ended August 13 totaled 1,024,000 bbls., a daily average of 146,285 bbls., compared with 1,382,000 bbls., a daily average of 197,429 bbls. for the week ended August 6 and a daily average of 165,786 bbls. for the four weeks ended August 13.

	Week ended August 13
At Atlantic Coast ports:	
Baltimore	140,000
New York	419,000
Philadelphia	115,000
Others	180,000
Total	854,000
Daily average	122,000
At Gulf Coast Ports:	
Galveston district	40,000
New Orleans and Baton Rouge	130,000
Total	170,000
Daily average	24,285
At All United States Ports:	
Total	1,024,000
Daily average	146,000
Daily average four weeks	165,786

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended August 13 totaled 707,000 bbls., a daily average of 101,000 bbls., against 573,000 bbls. a daily average of 81,857 bbls. for the week ended August 6 and a daily average of 99,286 bbls. for the four weeks ended August 13.

	Week ended August 13
At Atlantic Coast Ports:	
New York	335,000
Philadelphia	234,000
Others	138,000
Total	707,000
Daily average	101,000
At Gulf Ports:	
Total Atlantic and Gulf Coast Ports	707,000
Daily average	101,000
Daily average four weeks ended	99,286
Distribution of total California receipts is as follows:	
Crude	237,000
Gasoline	232,000
Fuel oil	138,000
Total	707,000

Old *timers know!*

The men who have spent years walking the derrick floor can tell you about Burns Dependability.

Through their years of experience, meeting with hundreds of tools . . . testing them where conditions are the worst, they *KNOW* the superiority of the Burns Tubular Temper Screw.

TEMPER BURNS SCREW

Always use genuine Burns parts for continued satisfying operation.

BURNS *Tool Company*

OKMULGEE - OKLAHOMA

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

FOR SALE—EQUIPMENT

5 Dean Triplex Pumps, 5 by 8.

1 No. 2, 1 No. 5, 1 No. 6, 2 No. 7, 1 No. 10, 1 No. 11, 1 No. 12 Sweetland Oil Filters.

Two 10-inch S. Roturbo Centrifugal Pumps. Six 10-inch S. Centrifugal Pumps. Steam Turbine.

Storage Tanks. Send for list.

Send us your inquiries.

We buy your surplus equipment.

CONSOLIDATED PRODUCTS CO.
15 Park Row, N. Y. C. Barclay 0603.

STORAGE TANKS FOR SALE
Quick Shipment

We have just purchased the equipment of the Kansas Oil Refiinery Co. at Coffeyville, Kansas, and can furnish the following storage tanks at attractive prices and make immediate shipment:

1—55,000 bbl.	2—2,500 bbl.
1—37,500 bbl.	3—1,250 bbl.
2—15,000 bbl.	3—1,000 bbl.
1—12,000 bbl.	19—500 bbl.
1—5,000 bbl.	6—350 bbl.
2—250 bbl.	

7—Dismounted car tanks.
11—Stills.
6—Agitators.
Wax house equipment.
Pan house equipment.
Filter house equipment.

Can be inspected at any time. For further details, write or phone,

MACHINERY & SUPPLY CORP.
Box 616 Joplin, Mo.

FOR SALE

100—72 in. x 18 ft. Erie City and Atlas Return Tubular Boilers.

1 lot 8x5x10 Canton-Hughes Duplex Pumps.

1 lot 10x6x10 Canton-Hughes Outside center Packed Plunger Pumps.

1 lot 5x5 A. B. C. Steam Engines direct connected to 3-in. Steam Jacketed Centrifugal Pumps.

1 lot Compressors—various makes.

1—Structural Steel Building.

1 lot 50-ton, All-Steel, Self-Cleaning, Hopper bottom Gondolas.

2—Large Locomotives.

All in A-1 Condition.

THE UNION SULPHUR COMPANY,
Sulphur, Louisiana.

FOR SALE CHEAP—25 tank car tanks with capacity from 6,000 to 6,500 gallons. Also tank cars complete. A. Rosenblatt, Tiffin, Ohio.

FOR SALE

One Worthington Duplex compound steam pump 8 inch suction 6 inch discharge.

One steam driven air compressor Ingersoll Sargent class No. 3 with compound steam and air cylinder 16-inch stroke steam cylinder 15 and 28 inches air cylinder 25¼ and 16¼ inches.

One Sullivan Angle compound machine driven by electric motor, capacity 1,040 cubic feet per minute size 20 and 12 by 14 inches.

Box B-971,
The Oil and Gas Journal,
Tulsa, Okla.

USED LINE PIPE AND CASING FOR SALE

7—25-h.p. used gas engines.
10—6-in. standard rigs.

15,000 ft. 5⅛-in. used casing.
15,000 ft. 6⅝-in. used casing.
10,000 ft. 8¼-in. used casing.
5,000 ft. 10-in. used casing.

75,000 ft. 3-in. used line pipe.
50,000 ft. 4-in. used line pipe.
20,000 ft. 6-in. used line pipe.
For immediate shipment from our Texas yards.

KEYSTONE PIPE & SUPPLY CO.
607 Holmes Bldg.,
Fort Worth, Tex.

FOR SALE—EQUIPMENT

FOR SALE—Machine Shop located in heart of Mid-Continent field. Completely equipped to handle all kinds of machine work. For full particulars address Box B-990, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE

Eleven 35 H.P. Foos Gas Engines; Two type No. 10 Imperial Ingersoll-Rand Compressors. This equipment in A-1 condition, located at Norphlet, Ark. For full particulars write J. E. Galligan, Skelly Oil Co., Tulsa, Okla., or E. W. Bissett, Skelly Oil Co., El Dorado, Ark.

A GREAT BARGAIN

1—24 Star with drilling tools.
1—28 Special mounted boiler, like new.
1—23 Star, frame cracked, with tools.
1,300-ft. new ¾-inch drilling cable.
1—3x5 tool box, all kinds of tools.
$1,200 buys all if sold by September 1.
Inquire D. F. Troup, 719 Wick Ave., Ashland, Ohio.

COMPLETE Indiahoma Refinery at East St. Louis being dismantled. Everything for sale. Tanks, 6—55,000 bbl., 2—25,000 bbl., 1—15,000 bbl. and 50 others; 15 miles 4-in, 6-in and 8-in pipe; 7 stills; 9 condensors; 8 boilers; valves from 2 in. to 10 in.; laboratory outfit; 20 steam pumps; 10 Foamite fire engines. Prices low.

HYMAN-MICHAELS CO.,
Railway Exchange Bldg., St. Louis, Mo.

LUBRICATING EQUIPMENT FOR SALE

Including complete wax house, pan house and filter house machinery.

2—48" Carbondale filter presses—Used only 8 months.

1—Congealer—400 bbl. capacity—Used only 8 months.

1—20 ton Carbondale absorption refrigerating unit complete.

1—Pan rack—6 pans 7 ft. x 15½ ft. x 6 in.

1—Pan rack—8 pans 7ft. x 15½ ft. x 6 in.

6—Pans 10 ft. x 40 ft. x 10 in.—never used.

2—800 sq. ft. Allbright-Neil filter presses—used 2 weeks.

Can make immediate shipment—material can be inspected at any time.

For details and prices write or phone,
MACHINERY & SUPPLY CORP.
Box 616 Joplin, Mo.

FOR SALE at a sacrifice, 6 only, 122-foot, and 8 only, 82-foot McGraw, Baughman and Bearley Standard Turnbuckle derricks; on hand at Braman, Okla. If interested, write or wire G.H. Stevens, Room 1022, Mayo Bldg., Tulsa, Okla.

FOR SALE—One Ingersoll-Rand "Imperial" type 10 steam driven air compressor. Used one month. Excellent condition. Priced right. Summerfield G. Roberts, 1805 Allen Bldg., Dallas, Tex.

BARGAINS FOR SALE

1—New No. 26 Star drilling machine, with 30 H.P. mounted boiler and complete set of tools.

1—No. 32 Steel Keystone drilling machine with 30 H.P. mounted boiler and complete set of tools.

1—No. 23 Star drilling machine with 25 H.P. boiler and complete set of tools.

1—No. 5½ Steam Keystone tractor drilling machine with complete set of tools.

1—D-Cyclone, gasoline, tractor drilling machine with complete set of tools.

1—No. 30 Special Sparta, gasoline, tractor drilling machine with complete set of tools.

One 1,200 bbl. steel riveted tank, knocked down.

2—Twin 25 H.P. Oil Well Supply Co. Oil engines, with 5x12 Oil Well Supply Co. belt driven Mud Hog pump.

One 5x12 Vogt Bros. steam pump.

One 350 barrel steel riveted agitator.

THE TRACY SUPPLY CO., INC.,
Bowling Green, Ky.

EQUIPMENT WANTED

WANTED—Two pipe machines—One from 1 to 4 and one from 4 to 10. These machines must be in first-class condition, and up-to-date makes. Ohio Iron & Supply Company, P. O. Box 399, Lima, Ohio.

WANTED—To purchase 125 to 150-Horsepower Gas Engine, Standard make. Col-Tex Refining Co., Colcord, Bldg., Oklahoma City, Okla.

MANUFACTURING MACHINISTS

CRAGO CUT GEARS
Worthy of your confidence. General machine work. 1416 Walnut, Kansas City, Mo. Phone Harrison 7660.

MACHINE WORK — CASTINGS
Machined to your drawings, Gears, Machinery designed and built.
Modern Facilities—Prompt Service
Reasonable prices. Send for our booklet.
GENERAL ENGINEERING AND MFG. CO., ST. LOUIS, MO.

CONTRACTORS

RELIABLE DRILLING CONTRACTORS
Drilling propositions entertained.
Exceptional references.
CLARK & AMIS, INC.
313 Mid-Continent Bldg.,
Tulsa, Okla.

BUSINESS OPPORTUNITY

EXPERIENCED Oil Operator, owning standard rig and tools, now engaged in drilling wildcat wells in Texas, wishes to form an association with individual or oil company, capable of assisting in the financing of new wells, on large blocks of acreage, and the purchasing of semi-producing properties; man with legal training preferred; references exchanged. Box B-960, The Oil and Gas Journal.

WILL EXCHANGE clear Kansas City 9 stores, 16 apartments and hall for shallow settled production or producing royalties—$50,000-$100,000. Hanley, 502 Bryant, Kansas City, Mo.

FIVE WELLS made 980 bbls. Experienced operator wishes to form an association with individual or company capable of financing wells in rich shallow field. Box 336, Owensboro, Ky.

WILL PAY CASH
NATURAL GAS PROPERTIES
United States or Canada
Must have gross sales not less
One Hundred Thousand Dollars
past twelve Months. Address
P. J. MINCK, 720 S. KENOSHA
Tulsa, Oklahoma

A DESCRIPTION of your used equipment run in these columns will sell it for you at a nice profit.

CAPITAL—An experienced dependable broker with following will aid in financing a worth while proposition. B. W. 810 Broad St., Newark, N. J.

FINANCE your project with stock bonded. Quickest and most satisfactory known method of raising capital. Information free. Bankers Interstate Security, Electric Bldg., Denver, Colo.

OIL MEN—come to our new field in McKinley County, New Mexico. Three known producing sands from 300 to 1,800 feet, good drilling and high gravity oil. If you have the tools we will finance you if desired or give you acreage free to drill the Hospah Structure. Production practically sure in all tests. Box 611, Albuquerque, New Mexico.

POSITION WANTED

HIGH CLASS specialty salesman is desirous of making connections direct with manufacturers of oil field equipment to represent them in this section of the country. Have been an independent oil operator for the past seven years and am fully familiar with all angles of the oil business. Can sell anything on earth that has merit and backed up by the manufacturer. If you wish to be represented by an order-getting salesman who has ambition, determination and ability. Address Box B-980, The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED

EXPERT ACCOUNTANT-AUDITOR. Experienced in banking and corporation; operates Moon-Hopkins, Remington, Elliott-Fisher bookkeeping machines. Capable of responsibility as accountant or manager, anywhere for permanent connection. Familiar with Spanish language. Box B-999, The Oil and Gas Journal, Tulsa, Okla.

PRACTICAL ENGINE and compressor man. Factory training and several years field experience. Age 34. Good education. Present location in the East and desire permanent connection with oil company in the West. References. Box B-993, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

EXPERIENCED GEOLOGIST, a transitman, and a draftsman. Submit complete statement of experience; state salary. Box B-995, The Oil and Gas Journal, Tulsa, Okla.

SALESMAN

We require a high-grade man with experience selling power-plant specialties. Acquaintance with executives or buyers in industrial field in this territory is necessary. Every industrial and public institution, hotel, office building are prospects. The entire line are proven producers and backed by a Surety Bond, guaranteeing complete satisfaction on each sale. A man with the ability and initiative to sell can secure a permanent, profitable position with 100% co-operation from this company. Thorough training given; exclusive territory. Give complete details; replies confidential.

THE NORTH AMERICAN FIBRE PRODUCTS COMPANY

Cleveland, Ohio

ADVERTISING RATES

	1 Time	2 Times	3 Times	1 Mo.
3 lines	1.05	1.80	2.55	3.30
4 lines	1.40	2.40	3.40	4.40
5 lines	1.75	3.00	4.25	5.50
6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

(Six words usually make a line.)
Compute white space at the above rates.

Mail your advertisement to

THE OIL AND GAS JOURNAL

Tulsa, Oklahoma

OIL JOURNAL readers, $3,000-$25,000 find our Service effective in making connections. Individual. Confidential. Not Agency. Jacob Penn, Inc., 9 Park Place, New York, N. Y.

WE ARE interested in securing competent sales engineers who are familiar with power equipment for the oil fields. Write to Box B-967, The Oil and Gas Journal, Tulsa, Okla.

FOREIGN WORK MEN interested in oil, mine, railway work, etc., in South America; write at once. South American Service Bureau, 14,600 Alma, Detroit, Mich.

FOREIGN WORK

Men wanting work with the large oil companies in foreign fields write immediately to the Foreign Service Company, Cotton Exchange Bldg., Fort Worth, Tex.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

LEASES—PRODUCTION

80-ACRE oil lease at attractive price. Near production in Artesia, New Mexico, oil field. Lease Salesmen and Brokers, here's a chance to make real money. Write for description and price. Western Land Co., P. O. Box 100, Oakland, Calif.

SOUTHEAST Lea, Winkler, Loving, and Gaines 1,000 acres for lease; all sizes and prices; 4,600 acres of royalty, all prices; good buys; close to production. I buy and sell. R. R. Winningham, 902 W. Second St., Fort Worth, Tex.

FOR SALE—Leases, Oil Production, Asphalt, Lime Stone and Other Mineral Lands. W. P. Harley, Bowling Green, Ky.

FOR SALE—330-acre lease adjacent 100-bbl. well in Ohio County. Box 94-B, Hartford, Ky.

NEW MEXICO OIL LEASES

Have some 88 form, 5-year leases, on deeded lands with abstract to date that I will sell for 75c per acre; rental 25c. Located in DeBaca County; number of wells drilling in this part of New Mexico. Looks like a money-maker.

L. D. KIGHT
119 W. Sixth St., Amarillo, Texas.

LINCOLN County, Oklahoma, farm for oil lease; southeast ¼ Sec. 35, Twp. 13, Range 2 east. N. J. Siler, Linwood, Kans.

BREWSTER County, Texas.
Potential Oil land in Fee.
Leases, Royalties, etc.
H. D. Wilcox, Alpine, Texas.

FOR SALE—One 10 acre lease, $75; one 20 acre lease, $80. In far famed Crockett County, Texas. Write for description. M. T. Heath, 147 West 71st, Chicago, Ill.

FOR SALE—Forty (40) acres in fee; S. E. of S. W. ¼ Sec. 7; Township 20 N. Range 10 east; Pawnee County, Okla. Price $1,200. Not leased at present time. Address, Brodie T. Atwater, 2746 East Tenth St., Tulsa, Okla. Phone 3-9363.

10,240 ACRE government permit drilling block Eddy County, New Mexico for small cash bonus and 2,500 ft. well. Now has old 700 ft. gas well on same.

WYLIE-BLINEBRY, Inc.,
319 Martin Bldg., El Paso, Texas.

IF YOU buy or sell royalties, leases or production you should not overlook The Oil and Gas Journal Classified Wants. They comprise the best medium of exchange available to you.

THE HOSPAH STRUCTURE of McKinley County, New Mexico is proving a Wonder New Field. Three known producing sands ranging from 300 to 1,800 ft. and producing from 10 to 1,000 barrels per day. Practically all the Major companies operating in this State are interested and drilling. We control the Field and to induce others to help develop our holdings, will join you or give acreage free for a limited number of tests, to those who have rigs or can get them. Box 611, Albuquerque, New Mexico.

WE HAVE a twenty five hundred acre block on structure in Anderson County, Texas for well. We have many, best lease buys, in U. S., especially in Grady County, Okla., which indicates another Seminole pool. Write for a special Lease Bargain and picture of a Grady County gusher. We want to make connection with first class broker to syndicate a well on proven and semi-proven acreage. We have good contract to offer. We give highest Bank and Chamber of Commerce reference. Commerce Development Co., 1st Nat'l. Bldg., Chickasha, Okla.

HAVE SIX large blocks in southern Crockett and northern Val Verde County, big play already started. Don't delay. Prices $1.25 to $2.00 per acre. L. G. Graves, 19 So. Chadbourne St., San Angelo, Texas.

LEASES—PRODUCTION

NEW MEXICO Oil and Gas Leases for sale in Seven Lakes—McKinley County proven area. Write or wire Otto Fellin, Gallup, N. Mex.

PRODUCTION FOR SALE—Marion and Butler County, Kansas. Deal direct with owners. Box B-994, The Oil and Gas Journal, Tulsa, Okla.

2,000 ACRES adjoining Standard Oil's 4,000 barrel well at Walden; will sell all or part or will lease; also have 150 barrel well at Florence on 480 acres. Apt. 10, 325 East 18th Ave., Denver, Colo.

NEW MEXICO LEASES

Leases bought and sold any part of state. Inquiries replied to promptly; maps. William U. Tate, Francisan Hotel, Albuquerque, N. Mex.

FOR SALE—13 acres, Sec. 22-17-4, Lost Springs, Marion County, Kansas. Near four good oil-producing wells. Will lease or sell. Owner, George Vest Tussey, 4367 Oakenwald Ave., Chicago, Ill.

FOR SALE—At bargain price oil and gas lease on 320 acres; 80 acres in Allen County, Kans., E½ SE¼ Sec. 27 T24 R21; 240 acres in Bourbon County, Kans., NW¼ & N¼ of NE¼ Sec. 26 T24 R21 leases adjoin, with 18 producing shallow wells and about 20 locations to be developed. Write W. H. Quigley, 1506 Linwood Blvd., Kansas City, Mo.

ADVERTISING RATES

	1 Time	2 Times	3 Times	1 Mo.
3 lines	1.05	1.80	2.55	3.30
4 lines	1.40	2.40	3.40	4.40
5 lines	1.75	3.00	4.25	5.50
6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

(Six words usually make a line.)

Compute white space at the above rates. Mail your advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

NEW MEXICO oil leases; Lea, Eddy, Chaves, Union, Quay and all other active counties; complete list and map on request. Orcutt-Harris & Co., Colcord Bldg., Oklahoma City, Okla.

NEW MEXICO

Genuine opportunity to secure 2,560 acres for a well in the San Juan high gravity field close to production. Fuel and water on the ground. Price $2.50 per acre. Address P. O. Box 1195, Sapulpa, Okla.

SOUTHWEST TEXAS — WINKLER, Loving, Reeves, Ward, Pecos, Culbertson Counties.
Drilling blocks, Leases, Royalties.
Ranches in fee.
H. F. Anthony, Pecos, Tex.

LEASES and half royalties, Caddo, Blaine and other counties. Write for complete list. A. E. Baldwin, Anadarko, Okla.

LEASES—PRODUCTION

LEASES, Royalties and Drilling blocks in Eastland, Stephens, Callahan, Coleman and Brown Counties. Noell and Gray, Garner Bldg., Cisco, Texas.

"IN THE TREND"

Southeastern New Mexico and West Texas counties — Lea, Eddy, Chaves Gaines, Andrews, Winkler, Loving, Ward, Culberson and Pecos Counties, oil and gas leases, royalties and drilling blocks. We buy and sell. F. S. Blackmar, P. O. Box 541, Roswell, N. Mex.

WINKLER—PECOS COUNTIES
Leases and Royalties
W. S. PATTERSON
Pecos, Texas

FOR SALE—1,900 acres oil leases near Heritage and Red Boiling Springs, NE cor. Macon County; NW cor. Clay County, Tennessee; 25 cents per acre. E. C. Silvers, Leesburg, Ind.

TEXAS OIL LAND—Have 10,000 acres; lease or part for drilling. Center of activity. Owner Box 944, Long Beach, Calif.

OIL LEASES and royalties, Ector, Crane, Pecos, Reeves, Ward, Upton and Winkler Counties; buy or sell. C. H. C. Anderson, 712 Linz Bldg., Dallas, Tex.

ROYALTIES—PRODUCTION

ROYALTY — 80 acres, Seven North, One East, Cleveland County, Okla. Interests $25 up. Surrounded by tests nearing completion. Oil showing. F. W. Baum, 619 E. Pacific St., Springfield, Mo.

ROYALTY—Texas Panhandle, Donley County. A head of boom prices. A. W. Gerner, 804 N. Fillmore, Amarillo, Tex.

SELL producing royalty in Smackover Field, Ark. Only real buyer solicited, I don't answer letters to brokers. Box B-991, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—One-half interest in royalty (not leased) in Bandera, Kinney and Edwards Counties, Texas, $1.50 per acre. Address Box 531, Tulsa, Okla.

ONE-EIGHTH royalty and fee title, SE 4-24-19-4, Logan County, Okla. Wire offer. B. H. Dooley, Red Lake, Minn.

J. F. MARION OIL COMPANY
Magnolia Building
Dallas, Texas
Buys and sells Texas Oil Leases and Royalties

NOTICE

Offering undeveloped and producing royalties, leases and drilling blocks, Brown (Fry Field area), Coleman, Callahan and Shackelford Counties, Texas.
All offerings submitted will be accompanied by geological information.
M. ELDER & COMPANY
Coleman Hotel Bldg., Coleman, Tex.

MONEY RAISING

RAISE CAPITAL!

Through sale of securities in your corporation. Worthy enterprises only. Twenty-five years experience. Highest references.

NORTHCLIFFE,
25 West Forty-third, New York

CLASSIFIED advertisements in this section do pay well in money and in extended business relations. This has been proven by the continual advertising that we receive from the men in the oil industry, everywhere.

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 131 E. 13th, Oklahoma City, Okla.

SUMMER RESORTS

OZARKS—River front bungalow sites; $100, $5 monthly. Other bargains. Aug. Zimmerman, 1802 N. Fifth, Kansas City, Kans.

RANCHES AND FARM LANDS

FOR SALE—8,000-acre estate; must be sold. Improved farm in tracts of 160, 240, 320, 640 acres each. Manager 22 years with business, also expert accountant. Wonderful opportunity. Mrs. William M. Moroney, Beardsley, Minn.

READ THIS

FOR SALE—480 acres rich, level, black sandy farm, 10 miles north of Haskell and three miles from railroad town in Haskell County, Texas, and 3 miles from oil well drilling by Texas Company in Knox County; 400 acres in good cultivation, two sets of improvements and good water; produces good crops, Cotton, Corn, Wheat, Maize, Vegetables and Fruit. No better farm anywhere; $11,000 loan 6 per cent interest. Can be paid or carried. Price $60 per acre, on reasonable terms. Is a good investment. Write for information. P. D. Sanders, Haskell, Texas.

WANTED

WANTED—Leases in Texas and New Mexico, perferably large areas. Require ample time for thorough geological examination, which will be made during next winter. Box B-992, The Oil and Gas Journal, Tulsa, Okla.

DO YOU WANT to better yourself? Every week men are placed in responsible positions at good salaries through ads in this classified section.

WANTED CAPITAL to operate gold, silver, lead property. J. E. Cooper, Cripple Creek, Colo.

WANTED—WET GAS CONTRACTS

We want wet natural gas for casinghead plant. Will start erection immediately. Give volume, gasoline content. Contract Dept., Wm. H. Allen, 1215 Detwiler Bldg., Los Angeles, Calif.

GEOLOGIST

H. L. BALDWIN
Petroleum Geologist
Telephone 74
Fort Stockton, Tex.

INCORPORATIONS

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co. Wilmington, Del.

DELAWARE incorporators. Charters fees small, forms. Charles G. Guyer, 901 Market St., Wilmington, Del.

PATENT ATTORNEYS

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form.
Evidence of Conception
Bulletin "How to Establish Your Rights" and complete information free.
LANCASTER & ALLWINE
240 Ouray Bldg., Washington, D. C.

OIL INDUSTRY PRINTING

OIL FIELD LEGAL BLANKS

Leases, assignments, releases, township books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

CONSUMERS' LEDGERS

We are prepared to furnish from stock standard forms of gas meter Consumers' Ledgers. Sample forms and quotations on request. First-class material and workmanship.
DERRICK PUBLISHING CO.
Oil City, Pa.

Chicago Gasoline Demand Still Light

One Leading Refiner Reduces Price to 6¼ Cents Monday Morning. Kerosene Steady

By J. B. Waldo

CHICAGO, Aug. 22.—The chief item in the market on Monday morning was the reduction of its price on U. S. Motor gasoline by a leading refiner to 6¼ cents to the trade or, as the sales manager stated, to any one who wanted to buy. Regarding the reason for the change it was stated that the management received so many reports from reliable sources, both through their own men on the road and from regular customers, that the 6¼ price was freely available to good concerns over the entire territory that they felt not only justified in making this price but obliged to do so to be fair to their customers and to themselves. Other refiners were slow to announce any change in their prices but as many were already meeting competition as low as the new price there was really little change necessary. Some refiners are still nominally holding the half-cent at least until they hear further from headquarters.

The demand in the spot market continued light for all gravities and the higher grades are easy. Export demand is reported very quiet here. Some expect that the approaching Labor Day holiday will increase buying while others state that the recent cool nights have reduced the use of motor cars and the sale of motor fuel to some extent. A fair business will probably be had over the holiday by dealers but there is little reason to expect much additional demand on refiners for supplies for that day.

Kerosene is steady with a better demand reported by several and the consumption is expected to show improvement. The market for furnace oils is waiting on the weather, spot demand for distillates and zero oils of any kind being light. Inquiries from some gas companies have raised a hope that these may come into the market more actively during the coming week. Fuel oil is moving along steadily but not largely and prices seem just about steady at the recent quotations. The industry seems right now to be at the period of least activity for the summer season and most likely to run through the month without important change.

Unsatisfactory Week

Last week was one of the least satisfactory in the gasoline market, that has been known in this city for a long time. The spot gasoline market was very quiet and the price situation was so unsettled by free offerings by both refiners and marketers at less than the price which was held to by the larger refiners that there was no inducement that could be offered to cause a distributor to buy. There has been, all conditions considered, quite a stability of prices during the season. Refiners more than for years have held to their prices in the face of the competition from such plants or dealers as had to sell and were willing to take a lower price. There were periods of weeks when there was very little general shading of refinery prices. From time to time some large refinery would find it necessary to unload accumulations and the result was much greater than that refiner anticipated. This gasoline bought at a low price has really dominated the market. Some of it has seemingly always been available when prices tended upward. Restrictions of territory and the increasing output of plants so located as to have very favorable freight rates to large parts of the territory have played their part in holding prices down. Perhaps the most determining factor has been the large volume of marginal contract business. Some of the best posted sales managers have estimated the volume of the contract gasoline at 95 per cent of the total movement into this territory and even if this figure is excessive, the quantity delivered on contract has been so nearly equal to the requirements of the distributors that there has been only a restricted demand in the spot market. Surplus stocks of gasoline have been sold in competition for this limited demand and as most of the marginal contracts are based on or at least give the dealer an option to take the market price as his cost at the refinery, there has been little holding back on contracts as the result of lower prices in the spot market.

Very Little Spot Buying

As the demand now showed signs of slackening as is usual at this season of the year, refiners have been more anxious to sell and last week the buyer was discouraged from placing orders by the free offerings direct from refiners and marketers. When a good buyer receives each day a more favorable price from this point of view, he naturally waits until the last possible moment before placing any orders. This is what was going on last week. Shipments on marginal contracts were good but spot buying was less than fair. Some days a seller or two would report a fair business but there was at no time during the week any general buying movement. The gasoline division felt it most but there was no real activity in any department. The sales sheet of some of the active concerns showed on some days a most curious assortment of products sold. On day one broker showed a list of cars sold that included a car of Pennsylvania kerosene, bright stock from Texas, paraffin oil from Ohio, gasoline from refiners in three states and fuel oil from refineries in two states according to freight conditions. It was nothing unusual for that is the kind of business being done, a car of this and that and no great quantity of anything. One large refinery sales manager was rather boastful of an order for gas oil. It was for 20 cars. If business had been running in the former way it would have been classified among the miscellaneous sales.

The Ohio situation is described as going from bad to worse, not a sign of improvement. The price all through that state on U. S. Motor gasoline ranges around 6¼ cents Group 3 basis with less being taken in the southern part. Some wonder at the invasion of the territory by other Standard companies than the Ohio company and ask why the latter does nothing except cut the price of coupon books and build bulk service stations? Cutting the price has had no result. The Roxana Company is building up a statewide distribution owing to favorable freight conditions as regards its Illinois plant. The Refiners Oil Co., of Dayton which distributes a large quantity of gasoline, some of it from Baton Rouge, is adding to the number of its retail outlets both by purchase and construction of new stations. The public should be pleased but probably they do not give any thanks for the low price of motor fuel. It is a tough problem to solve and no evidence of any real attempt being made to solve it.

Too Many Stations

Unquestionably the public of all parts of the territory have used more gasoline this season so far than ever before and they should continue to do so for the remainder of the year. The only reason why each dealer does not have his share of the increase is that there are too many of them. The increase in the number of stations is greater than the increase in the gallonage in many parts of the territory, most parts as a fact. Yet dealers feel that they are obliged to put in more stations to protect their established trade. It is a good deal like drilling offset wells. One large organization is about to drill nine wells in the Southwest Texas district. It does this most reluctantly because other lease holders will not agree not to drill or bring in wells on adjacent leases. There is a large expense involved but they say what can we do? So the dealer who has a trade covering a certain district finds other dealers invading this district and building stations. So he splits up his district which was served by his one station and builds another. The usual and often the expected result is that he has nearly doubled his expense simply to hold his old gallonage. There is so much of this that the distributors are in many cases unable to carry the stocks of gasoline and other products they did formerly and they must buy at more frequent intervals and let the refiner carry the stocks. Right now they are confronted with the necessity of adding to their inventories their supply of furnace oils, so the profits on the gasoline season are expended for furnace oils when they might be cleaning up their liabilities by reducing their inventories.

U. S. Motor Price Sags

The price of U. S. Motor gasoline sagged a little last week and at the close was 6¼ to 6½ cents, the latter being the price held by the larger refiners. Reports here indicate that there are accumulations of gasoline at the refining centers, not large but sufficient to indicate that the drain on stocks had been stopped either by larger output or decreased shipments or both. Early in the week, the low price to the wholesale dealer for re-sale was 6¼ cents but gradually lower prices were named and after the middle of the week it was possbile to buy at 6⅛ cents that price being quoted by mail and wire to marketers and in some cases to large distributors and the trade believed that they could buy with an order at 6 cents. Some of it was bought at that price which permitted the buyer to re-sell the gasoline at 6¼ cents which was the price openly quoted by several of the sellers in their weekly trade letter.

The report of important buying by the Sinclair Refinery Co. of export gasoline in North Texas did not cause a ripple on the Chicago market. The higher tests were not influenced either as to demand or price. Both the 400 and the 375 end-point grades were at least an eighth of a cent lower at the close of the week. Specialties continue to sell well. There is a demand for the anti-knock gasolines of proven worth. The sales of the Standard Oil Co. of Indiana of its ethyl gasoline are steadily increasing and other distributors of high-grade antiknock fuels say that these are selling to their capacity. The Standard Oil Co. of Indiana occupies a very advantageous position in regard to ethyl gasoline of which it has the exclusive sale in its territory and there is a big demand for something that the dealer can sell in competition with it. One of the associations has been investigating the possibilities of "Stellarene" the product of the Leaman process and reports that its tests so far have been satisfactory but has not gone far enough to recommend it to its membership.

Natural gasoline has been moving quite briskly here of course in a small way but sales of as high as 15 cars are reported although the usual inquiry is for single cars. The A and AA grades have been the ones wanted and they have sold at 6 to 6¼ cents.

Kerosene Steady

Kerosene has ruled steady during the week. Some refiners who have held their product at 4½ cents have gotten in line with a 4¼-cent price. There is much less shopping around for kerosene than for gasoline, in many cases the dealers let the kerosene order go with the gasoline and in others they want a particular make and will stick to it while any gasoline will apparently meet their needs or the needs of their customers. There has been rather steady buying of kerosene, possibly in anticipation of the usual September harvesting demand. In some sections jobbers say that the farmers are using gasoline in preference. In most states where there is a gasoline tax they receive a rebate. If the states are prompt in forwarding checks on claims for rebate, it might be possible for the farmer to receive his rebate before he paid the oil man for the gasoline delivered to his farm. There were occasional sales of the 42-44 gravity but not many and several of the refiners claim that their 41-43 grade will average better than 42 gravity and be just as good as the 42-44. In Michigan the state inspectors have rejected cars in a number of instances on the ground that the flash was too low. It leaked out that in some instances at least the inspectors were using a testing apparatus that was not the kind specified in the state inspection law.

Distillates Moving Slowly

Distillates are moving slowly in the spot market at about the former price. The spot sales are a car here and there, no large orders. The distributors are very slow to commit themselves on their season's requirements, and one reason is that they are unable to judge the market, owing in part to the way that some refiners have reduced their price. One large dealer sought an adjustment of his contract last week, claiming that he had an offer of a better distillate at a lower price. His contract called for 4½ cents for a 37-39 straw distillate, and he stated that he had been offered a season's supply at 4⅛ cents for a 38-40 nearly prime white distillate with an even lower flash than his contract called for. He was assured that a fair adjustment would be made. Contracts are in so many cases like treaties: "made to be broken."

There is one factor in the furnace oil business that will be very important for several seasons. That is, that the dealers have no real assurance as to the amount of the consumption. This is not entirely due to weather conditions. The number of burners in use is growing rapidly in most localities. Burners are more reliable, more satisfactory in all ways. People have become accustomed to them. They are not waiting for someone else to try them out first. So that the record of past winters does not give an accurate indication of what the season of 1927-28 has in store for the dealer. After a number of seasons, the dealer will have a record to go on that will indicate his past extremes. Then he can safely order his minimum requirements plus allowance for the growth in the number of users. As it is, he has very little data either as to demand or supply. So long as he must take a chance, many have decided to play it safe and order small supplies until later in the season. Even the present spot prices allow but a small margin, and dealer after dealer had claimed that last season was not one in which his books showed that he made a profit. Prices to consumers are low, considering what they get. The net results of this condition is that refiners are pressing their distillates on the trade, and several would make contracts for a period, and probably over the winter, at 4 to 4⅛ cents. The former price is not so common, but it has been had for distillates with a low flash, rather dark in color and having a gravity in some cases 35-37, and in others of 37-39, degrees. There have been some distillate shipments rejected that were fine except for the flash. The flash must be right.

Gas oil is a little lower in price. Some

buyers have had quotations of 2½ cents for straightrun gas oil that met the U. G. I. specifications. This has been offered to wholesale distributors at 2⅜ cents in a few cases, but 2½ cents is the usual price to users, with low cold tests oils selling at an eighth cent higher, and straw zero oils scarce and held at a premium of one-fourth cent if to be had at all. The northern Louisiana refiners are holding for 3 cents, although the southern demand is about at an end. Their product is desirable for winter, and some have stated that they should store rather than sell at the present market. The demand from the industries and the gas plants is fairly good for the season of the year, but this at best means only about one-half the oil is moving that is due to move later under usual conditions. There has been a feeling that gas oil would not go below 2½ cents, as the gas companies would buy at that price, but they have not increased their purchases as yet, although they have been quoted 2½ cents for some days. There has been some ordering, but nothing to indicate that they were filling their storage. Several state that they have stocks as large as they want to carry, while the large companies have their contracts to draw on, where they still use gas oil. Many of them use the heavier oils and some can apparently use anything, even wax tailings.

Fuel Oil Steady

Fuel oil is moving steadily if not largely. There is more buying in the spot market than formerly, and this makes it more animated. It also gives some of the smaller dealers an opportunity to secure business from the large users, and they are making the most of it. The condition in this respect is almost exactly the opposite of the gasoline market. Some of the buyers for the large industries have done so well in the spot market that they are liable to hold back from contracting for a while longer, perhaps indefinitely. There have been few large orders from any source, and what business has been taken has been at lower prices. One of the larger industries states that it has purchased 18-22 fuel oil at 77½ cents, against a recent quotations that averaged at least 5 cents higher. Some heavy fuel oil has also been sold at 75 cents, against a recent low of 80 cents. These prices are going prices to large buyers, not the average of prices today, and the trade hope that they represent the lowest prices that will be made this season. In fact the outlook is stated to be favorable, and it is expected that the early part of next month will witness a somewhat larger demand, as the heating of the large stores, apartment and other large buildings using fuel oil will have to be provided for. Recently the temperature has been so low mornings and evenings that some heat has been desirable if hard to get. There are several industrial concerns that leave the matter of filling their tanks to the oil man, and these may feel that the time has come to serve their customers best by putting in a supply. The industrial situation is improving, although fall manufacturing is not under full headway and may be somewhat slow in starting. With a larger demand, the trade look for a firmer market and somewhat higher prices, but much will depend on the condition of the stocks. The outlook is that the supply of Mexican fuel oil will be even smaller than a year ago and that eastern users will require as much if not more of the supplies available from the Gulf ports and from California.

Complain as to Quality

There has been a great deal of complaint both from consumers and dealers regarding the quality of the fuel oil that is delivered on orders. Many cars have been rejected, due to an excessive amount of solid settlings. It appears that some of the refiners have been shipping cracked residual oils untreated. These residual oils are so full of solids that by the time a car is delivered the car will have in the bottom as much as 3 to 6 feet of so dense a solid that in some cases it was necessary to use a pointed steel rod to get a measure on the solids. Even the oil left in the upper part of the car is full of free carbon. Concerns have lost good customers through no fault of theirs simply because of the quality of the oil delivered, and some of the users threaten to go back to coal, where they say that they will at least know what they are going to receive. Some of the refiners are very careful to ship only treated oil, but others are continuing to deliver this quality of material. These heavy residuals are usable for fuel at the plant where they can be used hot. They will surely make trouble if shipped to the trade.

Lub Oils Moving Freely

Lubricating oils have been moving quite freely, so several refiners report, one sales manager stating that if his gasoline business was as good as his lubricating oil business proportionately he would have nothing to complain about. There is no special feature noted, no change in prices. Some of the activity is in winter oils. Regarding these, one large refiner with a special process is continuing to book large orders on winter oils at prices which their competitors claim are 5 to 7 cents below the lowest price at which they want to sell equally good oils. The industrial demand is stated to be fair and showing signs of improvement. Distributors of motor oils complain of the great competition that is met with for even the smallest account or, they say, for the business of the motorist.

Tank Wagon Prices

There has been no general change in the tank wagon scale over this territory, and, while the lower range of gasoline prices favors price cutting, as a rule the change in the various cut-price centers has been upward rather than downward. In some localities—Grand Rapids, Mich., for example—the normal prices have been restored. Some adjustments have been made elsewhere, but as a rule the situation is unchanged. Some of the concerns that indulge in cut prices have seen their mistake and are trying to get their locality back to normal, but the larger distributors usually being the last to cut are also slow in returning to normal prices until convinced that the repentance is sincere. The plan to reduce overhead expenses through the sale of gasoline at bulk stations on sidings is being worked extensively. In Ohio the Standard Oil Co. of that State is following the plan and selling at the tank wagon price at these stations. It has been absolutely proven that in the long run the plan of special inducements to secure business, be they cut prices, gift schemes or what not, only swap customers. They do not increase consumption to an appreciable extent. What the industry wants is not a swapping of old customers but new customers of its products. It is very possible that through careful study and planning a method could be devised for increasing business that would not be based on obtaining a temporary advantage over a competitor but on rendering more service to the public.

DISTRESS GASOLINE IN THE EAST LEAVES MARKET GENERALLY WEAK

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, Aug. 20.—Considerable distress gasoline made its appearance in the eastern markets last week, with the result that prices generally were weak. As refiners here are still meeting all competition, this distress material had the effect of reducing the refinery price still further, most factors now quoting 8¼ cents a gallon for U. S. Motor gasoline.

One big Mid-Continent refiner is making quite a campaign of selling gasoline direct to companies operating chain service station in the East, deliveries being in tank car lots, ranging from one to five cars a month. Prices are said to be from 7¾ to 8 cents a gallon, f. o. b. the siding nearest the stations, this being for Mid-Continent U. S. Motor gasoline. In other words, the gasoline is being sold on the basis of approximately 4 cents a gallon, f. o. b. Tulsa.

On first glance, it might appear that this price is rather low in view of the fact that Mid-Continent gasoline is quoted considerably higher than 4 cents. The fact is that the gasoline shipped to the Atlantic Seaboard represents material for which there is apparently no immediate market in the west. To sell gasoline on the Atlantic Coast, competition of both Atlantic Coast refiners and those buying cargo lots of gasoline from Gulf Coast and California refiners must be met. California gasoline is being delivered, f. o. b. Atlantic ports, for 8¼ and 8½ cents, the same prices which Atlantic Coast refiners are quoting.

Considerable rain in the past few days, with fairly cold weather, has restricted sales of gasoline somewhat, and this has added to the unfavorable condition of the market. In order to absorb the material now coming into this market from all sources, refiners figure that maximum consumption under hot weather conditions is necessary. A continuance of the present sort of weather would therefore mean lower prices within a few weeks as the surplus of gasoline increased, due to restricted consumption.

California oil is coming in at the rate of about 80,000 bbls. a day. While most of this is understood to be crude oil and fuel oil, there is also considerable gasoline, and the crude and fuel oil coming in must also be considered as contributing indirectly to the eastern gasoline supply.

The market for kerosene continues weak, largely as the result of stiff domestic competition and lack of sufficient export outlet. Water white is quoted at 6¾ to 7 cents at eastern refineries. Some material is available at 6½ cents. Prime white is in plentiful supply and is moving for as low as 5¾ cents in tank car lots. This is coming from western refineries.

Gas and Fuel Oil

Gas oil and fuel oil markets are firm. The situation does not seem to be unfavorably affected by the fact that California refiners have been underbidding eastern refiners on contracts for supplying Atlantic Coast bunkering requirements. There appears to be sufficient business for everybody at current prices. Venezuela and California oil continue to dominate the fuel oil market here.

Marketers of Diesel oil and bunker oil point out that Seminole has not seriously affected their prices, and doubt that a decline in Seminole production will help the market to any extent. They point out that there is considerable heavy oil in storage with production shut in in the heavy oil fields of both Venezuela and California. Chances of the fuel oil market turning either way in the near future are therefore considered remote.

Lubricating Oils

Increased offerings of western lubricating oils in the eastern market have caused some slight weakness in the market. Refiners also report both motor demand and industrial demand somewhat lower during the past week. Prices so far are holding fairly steady at refineries, but weakness in the retail market for motor oils is reported. One service station in New York advertises gasoline at 15 cents a gallon, retail, and oil 15 cents a quart. The usual retail price for motor oil is 30 cents a quart.

In as much as the favorable retail situation as applied to gasoline is also affecting lubricants in sympathy, it is doubtful whether present lubricant prices can be held. The industrial field is somewhat brighter because of a possible increase in activity this fall. However, this is not yet assured.

Paraffin Wax

The wax market is steady. Improvement in domestic and export demand has not helped the price situation much, with the exception of refined of higher melting points. Refined of 135-137 a.m.p. is up one-half cent a pound to 5½ cents. All other grades, however, are unchanged.

Some improvement is noted in the petrolatum market as a result of improved domestic consumption. Cream is quoted at 5¾ cents a pound, up one-eighth cent; lily white at 7¼ cents, up one-fourth cent; and snow white at 8¼ cents, up one-fourth cent. Prices are in barrels.

Domestic Trade Notes

The July issue of the "Compass," published by the Vacuum Oil Co., contains the first installment of a series of articles on marine lubrication.

"Automotive Industries" states "production of motor cars has been accelerated rapidly in the past few weeks and indications are that the August total will be close to the highest mark of the year for the companies exclusive of Ford, if, indeed, the best previous month of 1927 is not exceeded."

The oil industry, at least the retail end, is anticipating the reception to be given the new Ford car. It is believed many old Ford users have been postponing the purchase of a car awaiting the new model.

Export Market

Satisfactory exports of gasoline and continued small shipments of kerosene were the features of the export situation here for the past week. The bulk of the export trade was with Europe, which took nearly 6,000,000 gallons of gasoline, 3,500,000 gallons of kerosene, and about 1,500,000 gallons of lubricating oil.

The contracts signed by Standard of New York and Vacuum Oil for the purchase of Russian kerosene apparently are being reflected in this market. Prior to these contracts, exports of kerosene in cases to the Orient were fairly heavy and there occasionally was a bulk shipment to India, but this trade is almost at a standstill now. So long as these contracts remain in effect, the New York export market will probably be restricted to Europe, Africa and South America, fields which are big enough in themselves to keep this market busy.

Export prices at New York have remained steady despite falling off in business in some departments, largely because exporters feel the volume would not be increased by further reductions.

The lubricating oil export market has been unfavorably affected by a slowing down in business in some European countries. Prices are holding fairly steady despite this.

Exports of paraffin was are slowing down considerably. The recent heavy movement has stocked up foreign buyers pretty heavily for the time being, but there is no permanently unfavorable factor in the situation.

There was a good demand for petrolatums and some fairly large orders are said to have been booked for export to France.

The following table shows principal exports of petroleum and petroleum products from New York during the past three weeks (all figures in gallons unless otherwise noted):

	Aug. 17	Aug. 10	Aug. 3
Gasoline:			
Bulk	5,952,911	2,673,192	.....
Cases	169,500	1,478,890	1,223,460
Kerosene:			
Bulk	3,506,000	.....	.....
Cases	590,840	717,750	842,980
Lubricating oil:			
Bulk	1,485,000	.....	.....
Barrels	1,389,500	696,700	1,014,750
Cases	107,560	142,220	76,990
Lubricating grease:			
Barrels (lbs.)	.....	.....	945,000
Paraffin wax:			
Bags (lbs.)	220,000	255,200	1,165,560
Barrels (lbs.)	.....	.....	1,044,525
Petroleum asphalt:			
Barrels (tons)	.....	6,397	520

The foregoing figures include all shipments of 500 bbls., 1,000 cases, or over.

Tanker Market and Movement

The oil tanker charter market was inactive during the past week. The only two fixtures announced covered the export field. They follow:

Tanker Franklin, 1,690 tons net, lubricating oil, Gulf to Rio de Janeiro, 31s, September loading.

Tanker Aral, gasoline, Black Sea to Porto Pii or Santander, basis 25s, August-September loading.

Tankers seem to be busy in the coastal trade at present. There are few boats being offered. It is reported that Pan American Petroleum has chartered several

(Continued on Page 147)

Changes in Patent Office Procedure

Recent Revisions Will Expedite Service, Decrease Inequities and Add to General Usefulness in Oil Industry

By Harold L. Kauffman

A number of important revisions in patent office procedure have recently gone into effect, which changes should be of interest to those readers whose inventive ability in various divisions of the oil industry causes them at some time or another to make application for a patent.

The statutes were revised at the last session of Congress in compliance with the recommendations of the committee on patent office procedure, which committee was first appointed in October, 1924, by Hubert Work, secretary of the Department of the Interior; later when the Patent Office was transferred to the Department of Commerce, Herbert Hoover, secretary of Commerce, added two engineers to the committee and instructed the committee to continue its work. The final report of this committee, submitted in April, 1926, contained 108 specific recommendations designed to facilitate and improve the work of the Patent Office, and to simplify and to clarify the legal aspects of the patent system.

Among the revisions recently authorized by Congress are those discussed in numerical order in the paragraphs following. Incidentally, it has been said by competent authorities that the revisions made are more constructive and helpful than any legislation passed in the past 25 years relating to the patent system.

Filing Fee

1. The filing fee has been increased by $1 for each claim in excess of 20, and the final fee has also been increased $1 for each claim allowed in excess of 20.

It has been generally understood that while a number of claims could be made in a single patent, such claims should contain material differences. In other words, they should not consist of mere repetitions in varying phraseology of the same thing. It has been felt by patent examiners that a needless multiplicity of claims calls for limited construction of such claims and, therefore, the patent may be invalid because of ambiguity.

Nevertheless, applicants continued to abuse, grossly, the privilege of submitting an unlimited number of claims. Many applications contained far more claims than were necessary, and, as a matter of fact, it was not unusual for the Patent Office to receive applications that contained over 100 claims. It is self-evident that this practice enormously increased the work of the office and resulted in no particular benefit to anyone. In an endeavor to limit this abuse and, incidentally, to provide additional revenue to the office, it was deemed advisable to charge the nominal sum of $1 for each claim applied for and each claim granted above 20.

Amending Application

2. Application must be amended within six months instead of one year.

Where an objection is made by the commissioner to the form of the application, an amendment may be made to correct the error. Further, where a claim is rejected, same may be amended to avoid the references cited or the reasons given for the rejection. The ruling has generally been to the effect that an application may be amended at any time prior to the entry by the primary examiner of a final order of rejection.

Previous statutory provisions concerning amendments have specifically stated that amendment or other responsive action must be made within one year from the date of the preceding action by the patent office. If such action was not taken by the applicant or his attorney, the application was considered to have been abandoned, unless shown to the satisfaction of the commissioner that same was unavoidable.

As previously stated, the present statute now states that applications must be amended within six months instead of one year.

One Year Renewals

3. Renewals must be made within one year instead of two years.

Heretofore, the statutes provided that where a case was forfeited by the failure of the applicant or his attorney to pay the final fee within six months after allowance (as demanded by law), same could be renewed by anyone having an interest in the invention at any time within two years after the original notice of allowance. The right of renewal, regardless of whether or not more than one renewal was asked, had to be exercised within the two years. The original papers could be used in the renewal application, but a new filing fee was required.

The present statute makes no changes in regard to "renewals" other than to shorten the period of time for exercising the right of renewal from two years to one year.

Appeal Rights

4. The length of time allowed for appeals has been shortened from one year to six months.

Previously, the statutes provided that appeals must be taken from the Patent Office within one year, or within a shorter period of time fixed in the decision; further, that notice of appeal to the Court of Appeals from decisions of the commissioner must be given to the commissioner of patents within 40 days from the date of the decision, exclusive of Sundays and holidays; and, also, that a transcript of the record must be filed in the Court of Appeals within 40 days thereafter.

Now, appeals from decisions of the commissioner of patents must be made within six months instead of one year.

5. Abolishment of one appeal within the Patent Office, as a result of which an appeal from the examiner or from the examiner of interference goes directly to a Board of Appeals consisting of the commissioner, two assistant commissioners and two examiners-in-chief, three of whom shall constitute a quorum. A sixth members of examiners-in-chief has been supplied, so that it is possible for two Boards of Appeal to sit at the same time.

There is no question that the arrangement for handling appeal cases, as now provided, eliminating as it does one appeal in the Patent Office, will greatly facilitate the work and will effect a material saving of time and money in handling such cases.

6. Abolishment of one appeal outside the Patent Office.

Heretofore, appeals outside the Patent Office could be made to the Court of Appeals, after which the party losing the decision in the Court of Appeals could file a bill in equity under Section 4915 of the revised statutes. Now either of these courses may be followed, but not both. This provision also will reduce the costs of patent litigation and will serve further to expedite the obtaining of decisions.

Appeal Proceedings

In connection with "5" and "6" above, the following information concerning "appeals" and formalities and proceedings in such cases should be of interest to the reader, and will permit him to understand better what vast savings of time will result from the present statute.

The former statutes regarding appeals stated, in effect, that when a party was dissatisfied with the rejection of his claims by the primary examiner or with the decision in an interference case, he could appeal to the Board of Examiners-in-Chief; if dissatisfied with their decision, he could appeal to the commissioner in person; and if still dissatisfied with the decision of the commissioner, he could appeal to the Court of Appeals of the District of Columbia.

However, there can be no appeal to the Supreme Court from the Court of Appeals in any case brought up from the United States Patent Office. Likewise, there is no appeal to the secretary of commerce (the Patent Office is now under the Department of Commerce) from any action of the commissioner in granting or refusing patents, and the secretary of commerce cannot in any way control such actions.

A person to whom a patent has been allowed never has any grounds for appeal. However, there is a conflict of authority as to whether or not a patentee may appeal from an adverse decision in interference proceedings; and whi'e there are some decisions affirming the right of appeal, the weight of authority seems to be against it. Decisions have been rendered that, in interference proceedings, a decision awarding priority to the applicant and granting him a patent does not invalidate the existing patent.*

Concerning formalities and proceedings in appeal cases, the statutes provide, in effect, that the appellant must file in the Patent Office within a fixed time a notice of appeal to the Court of Appeals, together with his reasons of appeal specifically set forth in writing, and within a fixed time thereafter must file in court a certified copy of all the original papers and evidence in the case. It is to be noted that the commissioner, also, must furnish the court with a statement in writing of the grounds for his decision, touching the points involved in the reasons of appeal.

When the court is considering the matter, the commissioner and examiners may be called before the court for oral examination. Likewise, officers of the patent office may be called upon to attend the hearing in order to advise the court.

Appealable Decisions

Decisions that are appealable is a matter of interest to every inventor. In general, the rulings are to the effect that any action amounting to a final refusal of a patent as requested is to be regarded as a rejection and, consequently, is appealable whatever form that action may take.

The refusal to entertain an application is a rejection. Likewise, the requirement that an application be divided is a rejection and, therefore, appealable. More interlocutory or preliminary rulings or orders are not appealable, but only final decisions.

It is interesting to note that a rejection or decision by the commissioner is appealable even where there has been no decision in the case by the examiner or examiners-in-chief. Among the matters that are not appealable are to be noted the following: A refusal of a rehearing is not appealable; nor is a decision dissolving an interference. Attention is also called to the fact that the reasons for a decision are not appealable, although the decision itself can be appealed.

In reviewing any case that is appealed from the decision of the commissioner of patents, the court is limited to a consideration of the points involved in the reasons for the appeal. At no time will the court disturb, interfere or criticize the discretion of the commissioner of patents except in cases where that discretion has been greatly abused; and only in extraordinary cases will the court disturb the findings of the patent office. However, the court is not bound by the conclusions drawn from such facts, unless convinced that such conclusions are correct.

It is a commonly considered fact that the question of invention is a general one which should be settled by the experts of the patent office, and not by the court. The court, also, will not consider the question of the inoperativeness of a device as an incident of the main question of priority.

In appeals made from interference cases, the court will not consider the patentability of the invention, the question in such cases being one of priority and not of patentability.

The unanimous decision of the patent office will not be reversed by the Court of Appeals except for clear error. It will not be reversed on any mere question of doubt, regardless of whether it be correct or not. If the decision of the commissioner is correct, the fact that his opinion is erroneous is immaterial. At no time and under no considerations does the Court of Appeals have the power to send the case back to the patent office in order to take further proofs.

Patent Office Rules

Part in accordance with suggestions made by the committee on patent office procedure and part along the lines laid down by Thomas E. Robertson, commissioner of patents, the following rules have recently been established within the patent office in order to render improved service to patentees and patent lawyers:

1. Claims are now renumbered at the time of allowance instead of each time a change is made. This greatly simplifies correspondence and record-keeping and reduces liability of error.

2. Photostat copies of the drawings in each application are now made and placed on file at the time the application is received. This serves as a protection against loss and is otherwise beneficial.

3. It is now permitted to use original drawings in reissue applications. This eliminates the expense of making a new set of drawings and is also a protection against error.

4. A sufficient number of hard copies for trade-marks have been provided and facilities have been increased so that orders for soft copies of patents and trade-marks are now delivered the same day such orders are received, and, in no event, not later than the second day. Copies are promptly supplied the examiners and hence all the delays previously experienced are now avoided.

5. The issue division has been completely reorganized to change the flow of work and the arrangement of the files.

6. The trade-mark division has been wholly reorganized in order to carry out the committee's recommendation with respect to the routing of the work.

7. Changes in the lay-out of several of the divisions and of the equipment therein are being made, in so far as present conditions will permit, so as to conform to the natural and most practicable flow of the work. It is anticipated that this feature will be adequately provided for in the new building.

8. The usual preamble of printed patents has been omitted, thus saving from $8,000 to $10,000 per year.

9. Assignments are now being recorded by the photostat method, as a result of which it has been possible to decrease the clerical force required for doing this work and reducing the time for recording from 52 to 15 days.

10. The card indexes for assignments have been completed and are now in use. This has proved to be the biggest item of savings accomplished.

11. Adequate stenographic service has been provided for all examiners. This is important, as a great deal of time formerly was being spent by the examiners in writing their decisions in long-hand.

12. The work of the application division has been reorganized so as to proceed

*It is going to be interesting to watch the results of present interferences now declared in the Patent Office relative to "cracking" and whether or not issued cracking patents now in interference will be invalidated.

with the work in small lots in a steady flow. Formerly, the lots were going through in large batches, this resulting alternately in a peak and a trough of work and, consequently, in inefficiency.

13. Simplification of the storing of patent prints, so that they are better protected from fire hazards and more easily assorted and placed in and withdrawn from the files, has been made possible by a rearrangement of the filing cases and the addition of a number of new steel filing cases. This rearrangement of the filing cases was made possible by virtue of the department of the interior's releasing some of the space it was using in the patent office building. The present method of filing material in the examiners' rooms is to be replaced by the use of vertical steel filing cases and, at the present time, a new design of vertical steel file is being given a thorough trial.

14. A more suitable and satisfactory file wrapper has been developed and is now in use.

15. An entire wing of the new department of commerce building will be alloted to the patent office, in which quarters the patent office will have more square feet of floor space than now and, incidentally, the area will be much better adapted to the purpose than is the case in the present building. Until the new building is ready for occupancy, additional space will be obtained in other buildings adjacent to the patent office building.

Other Improvements

As a result of increased appropriations it has been possible to make other improvements and corrections, as follows:

1. Greatly improve the service of the mailing room, so that delays from that source are now very materially reduced.

2. Payment to the junior assistant and associate examiners a rate of pay equal to the average of their grade, and, effective July 1, 1927, an increase in salary to present examiners. One of the greatest difficulties in the patent office is the large labor turn-over among the examiners. This is largely due to the low salaries paid for the high type of men required. One of the outstanding needs of the patent office is a marked increase in the salaries paid the executive and examiner corps.

3. All patents in the public search room are being checked and missing patents are being placed in the files at a cost of about $20,000. Formerly, there was not a complete set of patents on file.

It is generally felt that the changes made, and as mentioned in this article, will expedite the work, decrease the inequities and contribute to the general usefulness of the United States patent system.

DISTRESS GASOLINE WEAKENS MARKET

(Continued From Page 145)

of its fleet, but this could not be confirmed.

During June 109 tank steamers transited the Panama Canal with an aggregate net tonnage of 595,946, on which tolls of $519,992 were collected. In point of net tonnage, tanker traffic for the month showed an increase of approximately 1.8 per cent over the same traffic for the corresponding month a year ago, while cargo tonnage showed a decrease of approximately 4.4 per cent under the same tonnage of June, 1926.

The tanker movement of oil to the Atlantic Coast was heavy during the week ended August 17, when total receipts were estimated at 4,894,000 bbls., a daily average of 699,000 bbls., compared with 3,806,000 bbls., or 544,000 bbls. a day, for the week ended August 10.

Receipts of oil by tanker from the Gulf Coast totaled 3,009,000 bbls and averaged 430,000 bbls. The Pacific Coast contributed 719,000 bbls., or 103,000 bbls. a day, while imports aggregated 1,166,000 bbls., or a daily average of 166,000 bbls. For the week ended August 17 more than 500,000 bbls. of oil arrived at New York from the Pacific Coast.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports for the last three weeks; also monthly record for the last 12 months (figures in bbls.):

	Week-ended—		
	Aug. 17	Aug. 10	Aug. 3
Gulf Coast	430,000	323,000	383,000
Pacific Coast	103,000	53,000	98,000
Mexico	88,000	79,000	102,000
South America	78,000	88,000	53,000
Total	699,000	543,000	636,000

	Daily Averages by Months				
1927	Gulf	Pacific	Mex.	S. A.	Total
July	406,000	83,000	78,000	49,000	616,000
June	378,000	118,000	68,000	47,000	611,000
May	332,000	58,000	91,000	53,000	534,000
April	388,000	93,000	69,000	61,000	611,000
March	345,000	103,000	36,000	81,000	565,000
Feb.	379,000	89,000	40,000	48,000	556,000
Jan.	362,000	73,000	49,000	61,000	545,000
1926—					
Dec.	363,000	57,000	40,000	61,000	530,000
Nov.	335,000	62,000	56,000	40,000	493,000
Oct.	270,000	71,000	61,000	43,000	445,000
Sept.	299,000	98,000	63,000	58,000	518,000
Aug.	320,000	61,000	71,000	46,000	498,000

The foregoing figures are based on the carrying capacity of incoming oil-laden tankers.

ROCKY MOUNTAIN AREA

(Continued from Page 140)

Co. has a producer good for 250 bbls. on the Norem lease, Section 10-35-2, and another good for 150 bbls. on the Putnam lease in Section 32-35-1.

The Tom Davis Syndicate drilled a well on Section 10-35-2 that was carried down into the Madison Lime for a deep test, it found nothing there and is now plugged back to the Ellis sand at 1,720 feet, where it will make a 25 bbl. well.

On Section 15-34-1, the Magic City Oil Co.'s well on the Burwash lease will make about 25 bbls. daily from the Ellis sand. On the same section, the Homestake Exploration Co. on the Howling lease has a producer that looked like a duster at first. A shot in the Ellis sand brought it in with a 50-bbl. production.

The Latah Idaho Oil Co.'s well, on Section 19-32-1, found a showing of oil in the Ellis sand in that part of the Sunburst Field that has hitherto been considered gas only.

The Ohio Oil Co.'s wildcat on Dry Creek in southern Montana, Carbon County, found a flow of gas that made 3,000,000 feet at 1,600 feet. However, this is not considered commercial and the well is being drilled down after mudding off the flow.

On the Black Butte structure, the Mineral Research Co. has abandoned its wildcat test and it is a dry hole. A second well is to be drilled there, however.

The Sunshine Trail, one of the main highways in northern Montana, which crosses over the boundary into Canada, is to be extended 400 miles northward into Saskatchewan and this will bring it into the Arctic country, where travel up to now has been by canoe or on foot. When this new road is completed, the auto will enter the land of the musk ox and the ptarmigan. The new road is to traverse the Peace River Valley.

FIELD RUNS FOR THE WEEK

Salt Creek	35,290
Teapot	1,100
Big Muddy	3,000
Dutton Creek	40
Grass Creek	2,600
Elk Basin	1,060
Greybull	15
Rock Creek	2,550
Notches	190
Rex Lake	170
Lance Creek	50
La Barge	450
Poison Spider	1,209
Osage	290
Hamilton Dome	1,420
Mule Creek	670
Lander	390
Byron	50
Lost Soldier	2,600
Simpson Ridge	110
Ferris	100
Cat Creek	2,110
Lake Basin	240
Kevin Sunburst	14,500
Iles Dome	490
Walden	97
Florence	317
Moffat	1,792
Tow Creek	970
Fort Collins	3,160
Boulder	25
Rangely	100
Hogback	360
Rattlesnake	754
Table Mesa	.....
Artesia	1,300
Total	79,909

FEDERAL TRADE REPORT ON GASOLINE FINISHED

WASHINGTON, D. C., Aug. 22.—The Federal Trade Commission's report on the inquiry into prices of petroleum has been completed. It will be ready for approval of the commission when it meets late in September, after which it is expected to be made public.

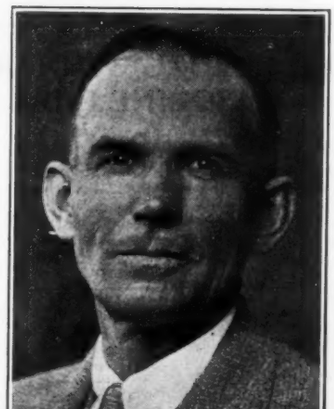
The report will be presented to the Senate in December, and contains information which, it is said, will be of value to Congress in the event legislation to regulate the industry is taken up.

RANGER WILL CELEBRATE DISCOVERY OF OIL WITH HOME-COMING JUBILEE

RANGER, Tex., Aug. 20.—All the color of the early days of Ranger's first oil gusher are expected to be re-enacted on October 21-22, when Ranger citizens will stage a home-coming and oil jubilee in celebration of the tenth anniversary of the discovery of oil in Eastland County, Texas.

Invitations will go ou to every man who flocked to Ranger from the four corners of the earth when the news of No. 1 McC eskey was flashed around the globe. Writers, whose pen made it famous as the City of Flowing Gold, the Black Golconda, and Rainbow's End, will be asked to come back again for two days and see the new Ranger. Skinners, who flung long blacksnake whips across sweating mules in an effort to get tools on a location, will not be forgotten. Oil magnates and heads of big companies who accomplished the colossal affairs of those days wi l be invited back to see the place they turned from a cowpath into a city. Contractors who flung houses together to care for the milling throngs in the early rush of '17, and who later built more enduring buildings, will mix and mingle and jostle on the main streets of Ranger with the same crowd they knew on those hectic days. Directories are being studied in search of names of those who had a hand in Ranger's early days, so that they may be invited to come home again.

John M. Gholson, pioneer settler and oil man of Ranger, is general superintendent of the home-coming and oil jubilee, and more than 40 prominent oil men



John M. Gholson

form the executive committee. A football game between the Ranger Bulldogs, champions of West Texas, and the Eastland Mavericks is scheduled for the first day. A barbecue, dances, street dances, luncheons, drives, and many novel stunts are to form the two days' program.

PANHANDLE FIELDS

(Continued from Page 48)

Section 127, Block 5, is to be identified as lease A.

Carson County

Skelly Oil Co.'s No. 7 Henry Schafer, Section 85, Block 4, on the Henry Schafer ranch between the Roxana and McConnel Pools, was completed in granite wash at 3,100-31 feet making 162 bbls. daily. Gulf Production Co.'s No. 5 Noel, Section 198, Black 3, I. & G. N. Survey, in the McConnell Pool, made 20 bbls., initial from pay at 3,060 to 3,161 feet; total depth 3,245 feet.

Gray County

One mile northeast of the Travis and associates' No. 1 Back, Section 44, Block 25, which came in several months ago as a sensational producer and then dropped down to 20 bbls. daily, the Empire Gas & Fuel Co.'s No. 1 Webb, SW cor., Section 59, Block 25, was a failure at a deep depth but was plugged back and saved as a gas well. The well was shot with 180 quarts at 2,841-80 feet without results after being plugged back from 3,455 feet. The well was then plugged back to 2,400 feet and saved as a 5,000,000-foot gas well at 2,325-28 feet. On the east end of the Gulf-Saunders area The Texas Company's No. 1 Combs and Worley, Section 58, Block 3, swabbed 342 bbls. initial from 2,975 to 3,005 feet; total depth 3,100 feet. The well averaged 122 bbls. during the past seven days.

Hutchinson County

Only three completions were reported from Hutchinson County during the week and two of those were in the comparatively new Sanford area near the west side of Hutchinson County. McMillan Oil Corp.'s No. 2 J. M. Sanford, Section 82, Block 46, H. & T. C. Survey, topped the pay in lime at 2,972 feet and bottomed at 3 030 feet and made 20 bbls. of oil and 100 bbls. of salt water, initial. The same company has another well in the same section with 1,000 feet of oil in the hole but it is shut down for pipe line connections. The second well in that area, Paramount Oil Co.'s No. 2 J. M. Sanford, was shut in as a gas well. It topped the pay in lime at 2,932 feet and drilled into water at 3,008-73 feet, total depth 3,073 feet. The well has 20,000,000 feet of gas at 2,285 to 2,595 feet and is shut in. West of Borger another gas well was completed. Red Hill Petroleum Co.'s No. 1 Johnson Brothers (Deal), Section 28, Block Y, A. & B. Survey, was completed as a 40,000,000-foot gas well at 2,300 to 2,635 feet.

SPANISH MONOPOLY'S SCOPE

The Spanish petroleum monopoly established recently affects the importation of combustible mineral oils and their derivatives included under the title, "Minerals, Earthy Materials and Their Derivatives." This group is more important in importation than exportation; in 1926 total imports of this class reached 216,000,000 pesetas, more than 100,000,000 pesetas of which were for gasoline, crude oil and mineral lubricants, while exports totaled only 116,900,000 pesetas.

RUSSIAN OIL SALES

The Russian Naphtha Syndicate reports that it has sold two-thirds of the total quantity of oil products which it proposes to export in the coming fiscal year. In a message from Tiflis it is stated that Ceylon and British India, which have hitherto bought American oil will get their supplies in the coming year from the Batum kerosene refienery. The syndicate also reports that it has concluded an agreement for the supply of Soviet gasoline to South Africa.

DETERDING BUYS PROCESS

A British dispatch says a new artificial fuel invention has been adopted by Sir Henry Deterding of the Royal Dutch-Shell company under a recently concluded agreement with the German dye trust. The invention was made by Professor Aarts of Dongen, Holland, and is called carbonalpha.

REFINING AND MARKETING

AMERICAN REFINING CO. IN HANDS OF RECEIVERS

DALLAS, Tex., Aug. 22.—The American Refining Co. of Wichita Falls, Tex., was placed in receivership through action in Federal court here today. The company joined with creditors in asking for the receivership. Ninety days were allowed the general creditors to intervene.

The American Refining Co. is one of the oldest refinery organizations in North Texas. It was organized in 1918 by Wichita Falls capital, the company building one of the first refineries in Wichita Falls. This plant is now operating with a rated capacity of 6,000 bbls. daily. The company's crude oil production at present is approximately 1,500 bbls. daily. The company also has a large number of bulk and service stations located in Texas and other southern states.

The financial difficulties of the company are said to be due to the low prices which have prevailed in the oil industry so far this year. W. M. Priddy, a well-known North Texas operator, is president of the company.

John W. Hooser, independent oil operator of Dallas; E. H. Eddleman, vice president of the Continental Oil Co. of Texas with headquarters in Wichita Falls, and J. C. Mytinger, oil and real estate operator of Wichita Falls, were appointed receivers. They will continue to operate the properties. No changes in management have been announced.

RATES INTO CANADA SUBJECT OF PETITION

Texas refiners have petitioned a reopening of the case involving the oil rates from north Texas and Mississippi valley points into Canada, recently decided against them by the withdrawal of the Canadian lines in participating in the established tariffs in Texas. The interstate commerce commission recently held that they had no jurisdiction over the action taken by the foreign roads, but the new petition disputes the commission's statement. The petition cites that the commission has assumed jurisdiction of through rates in the past, and that it should assume jurisdiction in the rates involved in this controversy.

GASOLINE TAX UPHELD BY ILLINOIS COURTS

The Chicago Motor Club lost the first court battle to stay the enforcement of the Illinois 2-cent gasoline tax by attempting to prove it unconstitutional. Judges J. K. Newall and W. J. Fulton ruled that the administration of the tax is not in violation of the state's constitution.

The court further held that a gasoline tax was not a double taxation of motorists in recognition of the tax already paid as license fees because the former was an assessment on the use of the roads, while the license fee was a tax on the power of the car. Counter to this idea, the association pointed out the escape from road taxation by electrically-driven cars, and said the law was discriminatory. The court then held that this was a matter for consideration by the legislature and not the courts.

PROTESTS OIL RATES

GREAT FALLS, Mont., Aug. 20.—The Arro Oil & Refining Co. has filed a complaint with the State Railroad Commission of Montana against the Great Northern Railroad and the Northern Pacific Railroad, charging excessive freight rates on crude oil shipments in Montana compared with the same class in other states.

DOLE PRIZE WINNER USES NATURAL GASOLINE FUEL. PHILLIPS SPONSOR

The oil world generally and the natural gasoline industry in particular welcomed the announcement on Wednesday, August 18, that the monoplane Woolaroc, piloted by Arthur C. Goebel, had won the Dole air race from Oakland, Calif., to Hawaii. The sponsor of the plane was Frank Phillips, president of the Phillips Petroleum Company, one of the most widely known figures of the oil industry.

Officials of Phillips Petroleum Co. and Arthur C. Goebel with monoplane Woolaroc at Bartlesville just before the start to Oakland where Goebel won the $25,000 Dole prize by being first in the flight to Hawaii. Left to right: L. E. Phillips, vice president and general manager; Clyde Alexander, manager of operations; Arthur C. Goebel, pilot, and Frank Phillips, president and sponsor of the plane. Drums in foreground contain Nu-Aviation gasoline used as fuel in the flight.

Special interest in the race has been manifest in natural gasoline circles for the reason that the plane piloted by Goebel was fueled with a product manufactured at one of the natural gasoline plants of the Phillips Petroleum Co., the largest manufacturers of the natural gasoline industry. This fuel, which bears the trade name of "Nu-Aviation" gasoline, was recently announced by the Phillips Petroleum Company. It is a product of natural gasoline, and was developed by the research department of the Phillips company.

The new motor fuel previous to the Goebel flight was used extensively in planes owned by the Phillips company and other companies. Although the specifications of the product have not been announced by the company, it is understood that it belongs to the class of so-called "super-stabilized" natural gasolines which are obtained by special fractionation methods, the objectionable light ends of the hydrocarbon series being eliminated from the finished motor fuel. The manufacture of finished motor fuels from natural gasoline was discussed in an article appearing in the July 21 (page 38) issue of The Oil and Gas Journal.

The gasoline is said to be especially adapted to airplane use, one advantage being that it weighs less per gallon than gasolines obtained in refining crude petroleum. The Goebel plane carried approximately 425 gallons of the Nu-Aviation gasoline. This gasoline, as shown in the accompanying picture, was shipped from Bartlesville to Oakland.

No engine trouble was experienced in the flight, according to Goebel. The 2,400-mile flight required 26 hours, 36 minutes and 33 seconds of continuous flying. The plane had approximately 100 gallons of gasoline still in its tanks when it arrived

(Continued on Page 161)

GASOLINE REDUCTION IN CITY OF CALGARY

CHATHAM, Ontario, Aug. 20.—R. B. Bennett, a director of Imperial Oil, Ltd., has announced a cut in the retail price of gasoline in the city of Calgary. The new price is 26 cents plus 3 cents tax, compared with 28 cents plus 3 cents tax. The announcement says:

"When Imperial Oil., Ltd., concluded to construct a refinery at Calgary rather than at the American boundary, its directors had faith that local oil fields would ultimately be discovered capable of supplying sufficient raw material to operate the refinery. In that faith several millions of dollars have been expended in the plant at East Calgary, which pays upwards of $20,000 per annum to the city for taxes, over $1,000 per day for wages, and provides employment for upwards of 200 persons, nearly 60 per cent of whom are heads of families.

"The company has been greatly disappointed in its efforts to discover crude oil in commercial quantities in this Province. Although nearly $5,000,000 has been expended we have not yet located any large pools of oil in Alberta. Crude naphtha has been obtained in fairly large quantities in Turner Valley and as a result of recent drilling in that field, some crude oil is now available for refining purposes.

"When it was decided to construct the refinery, the directors expressed the hope that as a result of its construction in Calgary, the discovery of satisfactory quantities of crude oil near the city would enable a reduction to be made in the local price of gasoline. While the present supply of crude oil from the Turner Valley Field is not sufficient to meet all the gasoline requirements in Calgary, we have concluded that the supply available makes possible a reduction of 2 cents per gallon for gasoline in this city. It would appear that the trend of gasoline prices in the future will have to be determined not alone by quality, but quantity and location of the crude oil available in Alberta, and while the quantity of Alberta crude remains insufficient for local consumption, the price will continue to be affected by general conditions in American fields which constitute the company's main sources of supply for it central-western Canadian refineries."

TANK WAGON PRICES BASED ON CURB PRICE

By N. O. Fanning

NEW YORK, Aug. 22.—The Tide Water Oil Co. has inaugurated the practice of trying so far as possible to fix tank wagon prices to its dealers in accordance with the retail or "curb" price in each particular part of the territory in which it markets. The reason that a particular tank wagon price cannot be maintained throughout a territory comprising several states is that in the present chaotic condition of the market retail or "curb" prices differ in various localities.

Tide Water, through its marketing subsidiary, Tide Water Sales Corp., attempts to keep a close check on prices in various sections, and regulates its price to the dealers in that locality so that the dealer gets a fixed margin, irrespective of what the curb price is. In other words, if the curb price is cut as a result of competition, Tide Water cuts the tank wagon market to a level in accordance with that reduction.

This step on the part of Tide Water Oil Co. is looked upon as constructive by marketers here. It tends to discourage the practice of giving concessions, in as much as the dealer is guaranteed a living margin of profit, no matter what the retail price happens to be. At the same time, Tide Water maintains a tank wagon market always in accordance with actual market conditions in each locality it serves.

Tide Water was the first company in this territory to "seal" its tanks at service stations to prevent substitution. The company regards the new policy as another step forward in gasoline marketing practice.

CITIES SERVICE FLEET IN INTERCOAST TRADE

NEW YORK, Aug. 20.—The fleet of oil tankers of the Cities Service Co. was omitted from the list published in the August 4 issue, in as much as some of the vessels have only recently been transferred to the company and do not yet appear in the Bureau of Navigation list. The names of these vessels with their gross tonnage and capacity have been furnished by the Cities Service Co. and are given below:

Name—	Gross tonnage	Capacity
Hadnot	9,298	77,500
Watertown	9,298	77,500
Hagood	10,238	81,000
Halo	10,078	81,000
Shreveport	10,030	81,000
Cities Service Fuel	8,100	63,000
Cities Service Petrol	12,623	100,000
Total	69,665	561,000

All of these vessels are now active in the intercoastal trade, some being engaged in carrying California oil to the Atlantic seaboard.

Brief Items for Plant Operators

ABSORPTION PLANT ON THE GARCIA DOME

DENVER, Colo., Aug. 20.—The Mountain States Gasoline Corp. is placing in operation its absorption plant on the Garcia Dome in Las Animas County, Colorado. The plant is using the Campbell Oil Froth absorption process invented by J. E. Campbell, of Long Beach, Calif. The Campbell Engineering Co. made the installation. Four wells in Sections 3 and 4-34-62 have been hooked up with the plant. These wells make from 150,000 to 250,000 feet of gas each.

The gas is extremely wet, some tests showing 2.2 gallons of gasoline per 1,000 feet. Two wells drilled on this structure more than 30 years ago still furnish the ranchers gas for domestic purposes and sufficient gasoline to run their Fords. So far, no oil has been encountered on the structure. A test drilled on the top failed to produce gas. Considerable drilling is under way to develop gas and it is possible that in some of the fault zones oil may be found.

ENLARGE DESTRAHAN FOR VENZUELA CRUDE

By N. O. Fanning

New York Bureau The Oil and Gas Journal.

NEW YORK, Aug. 20.—The Pan American Petroleum & Transport Co. is considering enlarging its Destrahan refinery in Louisiana. This refinery is running on Venezuelan and Texas crude oil. Enlargement of refining facilities is necessitated by expansion in the company's marketing facilities in the Mississippi Valley.

Reports that the company is planning a large oil refinery in Venezuela are denied. Lago Petroleum Co., a subsidiary, originally planned to construct a refinery on the island of Aruba, near Venezuela. The company has a sea loading terminal and tank farm there, but does not yet contemplate a refinery. It is cheaper to ship crude to the United States and refine it there than to ship refined products.

It is expected that the Destrahan refinery may be enlarged to double its present size, or to 50,000 bbls. a day.

NEW REGAL REFINERY IS NOW IN OPERATION

CHATHAM, Ontario, Aug. 20.—The newly completed refining plant of the Regal Oil & Refining Co., Ltd., of Calgary made its first run on August 13. The plant has an initial capacity of 750 bbls. a day. The output is being marketed through a series of service stations built by a subsidiary company, Regal Distributors, Ltd. The plant utilizes the fractationation process by means of which, it is claimed, 80 per cent of gasoline can be recovered from the Turner Valley crude. The company is planning to build a pipe line from Turner Valley to the nearest rail point at Okotoks to handle the Turner Valley output.

Officers of the Regal Oil & Refining Co. are: President, A. G. Spooner, Vulcan Oils; vice president and general manager, F. J. Huff; treasurer, Charles J. Seifert; secretary, Eric Harvey; directors, Fred M. Graham, president of New-McDougall-Segur Oil Co.; R. J. Hutchings, president of McLeod Oil Co.; A. J. Flood, A. E. O'Brien and Frank P. Book of Detroit, Mich. The plant is financed to the extent of 50 per cent by Turner Valley producers.

LIQUID FUEL DISCUSSION

The National Fuels Convention will meet in St. Louis, Mo., October 10 to 13, inclusive, as a part of the program of the American Society of Mechanical Engineers, to discuss engineering problems by groups, in accordance with limited subject matter. Topics regarding fuel uses will be discussed from the domestic, industrial and power viewpoints. Much of the discussion will be in regard to the use of coal, but E. H. Peabody, president of the Peabody Engineering Co., will cover the use of oil fuel in his paper on "The Burning of Liquid Fuels."

GILMORE CO. STARTS THIRD BOWLEGS PLANT

The Forrest E. Gilmore Co. this week started operating its third natural gasoline plant in the Bowlegs Pool of the Seminole area. All three plants have been placed in operation during the past month.

The plants are located on leases owned by the Atlantic Oil Producing Co. They are of the compression type and are operated in connection with the gas lift operation of the Atlantic wells. The plants obtain the gasoline from the gas used in operating the wells. A stabilizer unit is operated in connection with the compressors.

The first plant to start operating, which is known as the Gilmore No. 7, is located on the Fleet lease in NE NW Section 23-8-6. This plant at present is taking the gas from four wells and has an output of from 9 000 to 10.000 gallons daily. On the Grayson lease in SW NW Section 13 8 6, the plant is obtaining around 8,000 gallons of gasoline daily from one well. Other wells are drilling. The latest plant to start operating was the No. 9 on the Baker lease in the SE SE of Section 10 8-6. Its output is the same as the other two plants.

On the C. Jones lease in SW SE Section 9-8-6, a fourth plant is being built. These plants will operate as separate units as long as the gas is utilized in flowing the wells. Later it is expected that all four plants will be consolidated into one central plant.

The Gilmore Co., with the Riverland Oil Co., under the name of Clear-View Oil Co., is also building a similar type plant on the Okfuskee County properties of the Riverland Co. This plant is located in Section 19-11-11.

YUBA PLANT TO RESUME

Operation of the Yuba Oil Refining Co.'s plant at Nacogdoches, Tex., will be resumed, according to James B. Evans, who recently purchased the plant and leases on 500 acres of producing land near the plant. The refinery will run approximately 200 barrels of oil daily.

VINITA PLANT SOLD

The Sinclair Refining Co.'s old refinery at Vinita, Okla., has been sold to the United Iron Works of Joplin, and is being dismantled. The parts are being scrapped or shipped for use elsewhere. This ends the long controversy between the farmers along the Big Cabin creek and the Sinclair Refining Co., in which the farmers were successful in collecting claims as a result of contamination of the creek waters and damage to the land by the refinery sludge. The refinery has been shut down for several years.

QUICKER OIL SHIPMENT

The Toledo, Peoria and Western Railroad and the Santa Fe Railroad have completed a new connection southwest of Chicago that allows a saving of 24 hours time on oil shipments made to the east or west past Chicago. The saving has been made by eliminating the Chicago terminal.

AMONG THE TECHNICAL MEN

Expansion of the Crystal Oil Refining Corp. and the enlargement of its refinery facilities at Shreveport, La., has necessitated the creation of a new position, that of assistant superintendent, and the promotion of John J. Thomas to fill that capacity. Mr. Thomas, as engineer for the company, for the past few months, has been active in supervising the installation of much new equipment at the plant, assisting D. H. Christman, superintendent, but it has not been until the past week that he has been officially appointed assistant superintendent.

John J. Thomas

Mr. Thomas has been with the Crystal Oil Refining Corp. a year as engineer and purchasing agent, having charge of all engineering work not only in refining but also in production and pipe line work.

Prior to joining the Crystal family, except for a few months he engaged in the oil business in West Texas for himself, Mr. Thomas was with the Skelly Oil Co. at Tulsa, Okla., as first assistant to the general superintendent of the natural gasoline department.

In the latter capacity he did much natural gasoline plant engineering and designing work and for a long time was in the Texas Panhandle laying out plants and overseeing construction work for the company there. He assisted in building the company's first charcoal plant in the Panhandle.

Mr. Thomas is a graduate of the University of Oklahoma at Norman, where he studied engineering as well as geology, and later did postgraduate work in engineering at Columbia University, New York. After doing general work for a time he went back to Oklahoma and became connected with the Skelly organization.

PETROLEUM SECTION TO HOLD SAFETY CONFERENCE

The opening session of the petroleum section of the National Safety Council will be held at the sixteenth annual congress in Chicago on Tuesday morning, September 27, when there will be a breakfast meeting for officers, committeemen and speakers. At the general session the reports of the officers and committees will be presented, after which there will be addresses by H. N. Blakeslee, field representative of the section, on "The Accident Situation in the Petroleum Industry and the Progress Made Thus Far"; Dr. R. E. Humphreys, of the Standard Oil Co. of Indiana, on "Safety From the Executives' Point of View"; and A. A. Nicholson, of The Texas Company, on "What We Consider Our Chief Means of Instilling Safety Into the Hearts and Minds of Employes of the Sales Division."

On Wednesday morning, September 28, R. E. Donovan, of the Standard Oil Co. of California, will speak on "Tank Fire Tests"; Ralph E. Motley, of the Atlantic Refining Co., will discuss "How We Locate and Correct Unsafe Practices"; and H. J. Tobin, of the Standard Oil Co. of Indiana, will tell "What We Consider Our Most Successful Methods of Promoting Safety in the Sales Division."

On Thursday morning, C. L. Swim, of the Skelly Oil Co., will talk on "How We Promote Safety in Our Producing Department"; H. W. Boggess, of the Sinclair Oil & Gas Co., will discuss "Safety—Why and How From the Foreman's Point of View"; and W. L. Eggleston, superintendent Pan American Petroleum Co., will speak on "How We Promote Safety in Our Natural Gasoline Plants."

"How We Take Care of Injured Employes" will be told by T. N. Shaw, of the Midwest Refining Co., on Friday morning. V. Z. Osborn, of the Casper Refinery, Standard Oil Co., will tell "Our Reasons for and Methods of Departmental and Plant Inspection Committees"; and Earl M. Hearne, of the Marland Refining Co., will explain "How We Promote Safety Among Our Drivers and Service Station Attendants."

SAN ANGELO REFINERY RUNNING 50 PER CENT

SAN ANGELO, Tex., Aug. 22.—San Angelo Refining Co.'s 2,000-barrel skimming plant at San Angelo, which was badly damaged by fire July 22, resumed operations several days ago, and is operating at about 50 per cent capacity at present. The entire reconstruction work is expected to be completed by September 25, and the plant will be operated at capacity at that time.

At the time of the fire the company's stocks were such that it could take care of all of its retail trade and most of its wholesale trade. A new pipe still being built at the time of the fire was not greatly damaged and was placed in operation a few days after the fire. Most of the fire loss was covered by insurance.

Shell stills, bubble towers and special bubble towers are being built at this time. The San Angelo Refining Co. manufactures "Rainbow" products.

ROXANA LAYS NEW LINES

The Roxana Petroleum Corp. is laying four lines of 10-inch pipe over the Mississippi river at St. Louis, to supply its Wood River, Ill., refinery. This doubles the capacity of the original system. During the recent high water the two old lines were washed out, and the refinery has been operating on stored crude. The first line of pipe will be ready for use within the next week, and the second line will be ready in two weeks.

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Aug. 23		Aug. 16		Aug. 9	
OKLAHOMA (Group 3)—						
50-52 450 endpoint (Naphtha)	.06¼		.06⅜	.06½	.06½	
56-58 450 endpoint	.06½		.06⅜	.06¼	.06⅜	.06½
58-60 450 endpoint	.06⅜	.06¼	.06½	.06¼	.06⅜	.06½
58-60 437 endpoint (U. S. Motor)	.06¼	.06½	.06⅜	.06½	.06½	.06¾
60-62 400 endpoint	.06⅜		.06⅝	.06¾	.06¾	.06⅞
64-66 375 endpoint	.06¾	.07	.06¾	.07	.06⅞	.07
68-70 360 endpoint	.07⅛	.07⅜	.07⅛	.07⅜	.07¼	.07½
64-66 437 endpoint (blend)	.06½		.06½		.06⅜	.06½
KANSAS—						
58-60 437 endpoint (U. S. Motor)	.06½	.06¾	.06½	.06¾	.06¾	
NORTH TEXAS—						
56-58 437 endpoint	.05⅞	.06	.05⅞	.06	.06	.06¼
58 60 450 endpoint	.05⅞	.06	.05⅞	.06	.06	.06¼
58-60 437 endpoint (U. S. Motor)	.06⅛	.06¼	.06⅛	.06¼	.06⅜	.06½
60-62 400 endpoint	.06¼		.06⅜	.06½	.06⅝	.06¾
64-66 390 endpoint	.06½		.06½	.06⅝	.06¾	
64-66 375 endpoint	.06½	.06¾	.06⅝	.06¾	.06¾	.06⅞
68 70 360 endpoint	.06¾		.06¾		.06⅞	.07¼
64-66 437 endpoint (blend)	.06	.06⅛	.06⅛		.06⅛	.06¼
NORTH LOUISIANA—						
56 58 437 endpoint (U. S. Motor)	.06½	.06¾	.06½	.06¾	.06½	.07
ARKANSAS—						
58-60 437 endpoint (U. S. Motor)	.06½	.06⅝	.06½	.06¾	.06½	.07
PENNSYLVANIA—						
52-54 Naphtha	.08	.08⅜	.08¼	.08⅝	.08¼	.08⅝
54 56 Naphtha	.08½	.08¾	.08½	.08¾	.08¼	.08½
58-60 Gasoline	.08½	.08¾	.08½	.08¾	.08¼	.08½
60 Gasoline	.09	.09¼	.09	.09¼	.09¼	.09½
62 Gasoline	.09¼	.09½	.09¼	.09½	.10	.10¼
64 Gasoline	.09½	.09¾	.09½	.09¾	.10¼	.10½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.09	.09½	.09	.09½	.09½	.10½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.06¼	.06½	.06⅜	.06½	.06½	
56-58 450 endpoint	.06¼		.06⅜		.06½	
58-60 437 endpoint (U. S. Motor)	.06¼	.06½	.06½	.06⅝	.06½	.06¾
60-62 400 endpoint	.06⅝	.06¾	.06¾	.07	.06¾	.07
64-66 375 endpoint	.06⅞	.07⅛	.07	.07¼	.07⅛	.07¼
68-70 360 endpoint	.07¼	.07½	.07½		.07½	
64-66 437 endpoint (blend)	.06⅜	.06½	.06⅜	.06½	.06⅜	.06½

NATURAL GASOLINE

	Aug. 23		Aug. 16		Aug. 9	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06	.06¼	.06	.06⅛	.05½	.05¾
Grade AA, 80-87.9, 375 e.p., rec 90%	.06	.06⅛	.06	.06⅛	.05½	.05¾
Grade B, 76-83.9, 375 e.p., rec. 85%	.05⅝	.05½	.05⅝	.05½	.05⅛	.05¼
Grade BB, 84-92, 375 e.p., rec. 85%	.05⅝		.05⅝	.05½	.05⅛	.05¼
Grade C, 80 90. 375 e.p., rec. 78%	.05	.05¼	.05	.05⅛	.04¾	.04⅞
NORTH TEXAS—						
Grade A, 72-79 9, 375 e.p., rec. 90%	.06	.06⅛	.06	.06⅛	.05½	.05¾
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06		.06		.05½	.05¾
Grade B, 76 83.9, 375 e.p., rec. 85%	.05¼		.05¼		.05⅛	.05¼
Grade BB, 84-92, 375 e.p., rec. 85%	.05¼		.05¼		.05⅛	.05¼
Grade C, 80 90, 375 e.p., rec. 78%	.05		.05		.04¾	.05
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.06		.06	.06¼	.05¼	.05½
Grade BB, 84-92, 375 e.p., rec. 85%	.05¾		.05¾		.05	.05¼
Grade C, 80-90, 375 e.p., rec. 78%	.05½		.05½	.05¾	.04¾	.05
CALIFORNIA—						
75-85, 370, 390 endpoint	.08½	.09	.08½	.09	.08	.09
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06	.06¼	.06	.06⅛	.05½	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06		.06	.06⅛	.05½	.05¾
Grade B, 76-83.9, 375 e.p., rec. 85%	.05⅝		.05¼		.05¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.05⅝		.05¼		.05¼	
Grade C, 80-90, 375 e.p., rec. 78%	.05⅛	.05¼	.05		.04¾	.05

BURNING OIL

	Aug. 23		Aug. 16		Aug.9	
KANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04¼	.04½
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04	.04¼	.04	.04¼	.04	.04¼
42-44 water white Kerosene	.04⅜	.04½	.04⅜	.04½	.04⅜	.04½
NORTH LOUISIANA—						
41-43 prime white Kerosene	.04	.04¼	.04	.04¼	.04¼	.04½
NORTH TEXAS—						
41-43 water white Kerosene	.03⅝	.03¾	.03¾		.03¾	.03⅞
40-42 water white Kerosene	.03½	.03¾	.03⅝		.03¾	
ARKANSAS—						
41-43 water white Kerosene	.04	.04¼	.04	.04¼	.04¼	.04½
PENNSYLVANIA—						
43 Kerosene prime white	.05½	.05¾	.05½	.05¾	.05⅞	.06⅛
45 Kerosene water white	.05¾	.06	.05¾	.06	.06	.06¼
46 Kerosene water white	.06	.06¼	.06	.06¼	.06¼	.06½
47 Kerosene water white	.06½	.06¾	.06½	.06¾	.06¾	.07
300 Mineral Seal	.07	.07¼	.07	.07¼	.07	.07¼
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.05	.05½	.05	.05½	.05¼	.05¾
Engine distillate, 43-45 445 endpoint	.08	.08½	.08	.08½	.08	.08½
Engine distillate, 42-44 480 endpoint	.07¾	.08	.07¾	.08	.07¾	.08
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.04	.04⅛	.04	.04⅛	.04	.04¼
42-44 water white Kerosene	.04¼	.04½	.04¼	.04½	.04¼	.04½

FUEL OILS

	Aug. 23		Aug. 16		Aug. 9	
KANSAS—						
22-26 Fuel Oil	.85	.90	.85	.90	.90	.95
18-22 Fuel Oil	.80	.82½	.80	.82½	.85	.90
32-36 Gas Oil	.02⅝		.02⅝	.02¾	.02¾	
38-40 Distillate	.03⅛		.03⅛	.03¼	.03⅛	.03¼
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil	.77½	.80	.77½	.80	.85	
18-22 Fuel Oil	.80		.80	.82½	.85	.87½
22-26 Fuel Oil	.82½			.82½	.85	.87½ .90
24-26 Fuel Oil	.82½	.85		.82½	.85	.87½ .90
26-30 Fuel Oil	.85	.87½		.85	.87½	.92½ .95
28-30 Fuel Oil	.90			.90	.95	.97½ 1.00
32-36 Gas Oil (dark)	.02½	.02⅝		.02½		.02½ .02⅝
32-36 Gas Oil (straw overhead)	.02½	.02⅝		.02½	.02⅝	.02⅝ .02¾
36-38 Distillate	.03			.03		.03 .03⅛
38-40 Straw Distillate	.03⅛	.03¼		.03⅛	.03¼	.03¼
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	.80			.80	.82½	.80 .85
32-36 Gas Oil (straw)	.02⅜	.02½		.02½	.02¾	.02½ .02¾
38-40 Straw Distillate	.03			.02⅞	.03	.03 .03⅛
NORTH LOUISIANA—						
18-20 Fuel Oil	1.12½	1.15		1.12½	1.15	1.12½ 1.15
32 36 Gas Oil	.03	.03⅛		.03	.03⅛	.03 .03¼
ARKANSAS—						
36-38 Distillate	.03¼	.03½		.03¼	.03½	.03¼ .03½
32-36 Gas Oil (straw)	.03	.03⅛		.03	.03⅛	.03 .03⅛
16-20 Refinery Fuel Oil	1.00	1.05		1.00	1.05	1.00 1.05
GULF COAST (South Texas)—						
Gas Oil	.04			.04	.04¼	.04½ .04¾
Fuel Oil	1.60	1.65		1.60	1.65	1.60 1.65
PENNSYLVANIA—						
30-34 Fuel Oil	.03¾	.04¼		.03¾	.04½	.03¾ .04¼
36-40 Fuel Oil	.04	.04½		.04	.04½	.04¼ .04¾
CALIFORNIA—						
33-36 Distillate	.03¾	.04		.03¾	.04	.03¾ .04
27-32 Distillate	.03¼	.03¾		.03¼	.03¾	.03¼ .03¾
*15-20 Fuel Oil, Bunkers (at tide water)	.85	1.00		.85	1.00	.85 1.00
15-20 Fuel Oil (cargo lots)	.70	.75		.70	.75	.71 .75
27 plus Diesel	1.15	1.19		1.15	1.19	1.15 1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	.85	.87½		.87½	.90	.87½ .92½
22-26 Fuel Oil (sellers' cars) Group 3	.82½	.85		.85	.87½	.87½ .90
18-22 (Group 3)	.80	.82½		.82½	.85	.85 .87½
16-20 Smackover	1.10	1.15		1.10	1.15	1.10 1.15
32-36 Gas Oil (zero)	.02¾	.03		.02⅞	.03	.03
32-36 Gas Oil (industrial)	.02½	.02⅝		.02½	.02¾	.02¾ .03
36-38 Distillate	.03			.03	.03¼	.03¼
38-40 Straw Distillate	.03	.03¼		.03¼	.03⅜	.03¼ .03½

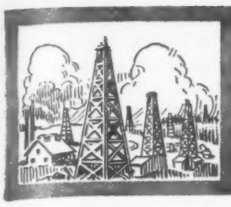
*Bunkers.

LUBRICATING OIL AND WAX

	Aug. 23		Aug. 16		Aug. 9	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06½	.06¾	.06½	.06¾	.06½	.06¾
100 vis., 3 color, 20-25 cold test	.06¼	.06½	.06¼	.06½	.06¼	.06½
150 vis., 3 color, 20 25 cold test	.08½	.08¾	.08½	.08¾	.08¼	.08¾
150 vis., 4 color, 20-25 cold test	.08¼	.08½	.08¼	.08½	.08¼	.08½
180 vis., 3 color, 23-28 cold test	.10	.10¼	.10	.10¼	.10	.10¼
180 vis., 4 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
180 vis., 5 color, 23-28 cold test	.09½	.10	.09½	.10	.09½	.10
200 vis., 3 color 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
200 vis., 4 color, 23-28 cold test	.10⅜	.10⅞	.10⅜	.10⅞	.10⅜	.10⅞
200 vis., 5 color, 23-28 cold test	.10½	.10¾	.10½	.10¾	.10½	.10¾
240 vis., 3 color, 25-30 cold test	.14	.14¼	.14	.14¼	.14	.14¼
240 vis., 4 color, 25-30 cold test	.13½	.13¾	.13½	.13¾	.13½	.13¾
240 vis., 5 color, 25-30 cold test	.12½	.13	.12½	.13	.12½	.13
280 vis., 3 color, 25-30 cold test	.15¾	.16¼	.15¾	.16¼	.15¾	.16¼
280 vis., 4 color, 25-30 cold test	.15¼	.15½	.15¼	.15½	.15¼	.15½
280 vis., 5 color, 25-30 cold test	.14¼	.15	.14¼	.15	.14¼	.15
Cylinder Stocks:						
600, steam refined, light green	.07	.09	.07	.09	.07	.09
600, steam refined, dark green	.05	.06	.05	.06	.05	.06
190-200 vis. @ 210 Bright Stock	.31	.33	.31	.33	.31	.33
150-160 vis. @ 210 Bright Stock	.26		.26		.26	
Waxes:						
124-126 White Crude Scale Wax	.02⅜	.02½	.02⅜	.02½	.02⅜	.02½
PENNSYLVANIA—						
34 Neutral	.07¼	.07½	.07¼	.07½	.07¼	.07½
34 Sundebloom Neutral	.08½	.08¾	.08¼	.08¾	.08½	.08¾
36 Miners' Neutral	.06¾	.07	.06¾	.07	.06¾	.07
150, 3 color	.27¾	.28	.27¾	.28	.28	.28¼
180, 3 color	.32¼	.32½	.32¼	.32½	.32¼	.32½
200, 3 color	.34	.35¼	.34	.34¼	.34¼	.34½
220, 3 color	.36	.36½	.36	.36½	.36	.36½
600, steam refined	.08¾	.09	.08¾	.09	.08¾	.09
635, steam refined	.10¼	.10½	.10¼	.10½	.10¼	.10½
650, steam refined	.12	.12¼	.12	.12¼	.12	.12¼
600, Pennsylvania flash	.17½	.18	.17½	.18	.17½	.18
630, Pennsylvania flash	.26½	.27	.26½	.27	.26½	.27
*550, E filtered	.17¼	.18	.17¼	.18	.17¼	.18
*600, E filtered	.18¾	.19½	.18¾	.19½	.18¾	.19½
600, E filtered	.17¾	.18	.17¾	.18	.17¾	.18
600, D filtered	.25	.25½	.25	.25½	.25	.26½
550, E filtered	.17½	.18	.17½	.18	.17½	.18
550, D filtered	.21½	.22	.21½	.22	.21½	.22
Pennsylvania Bright Stock	.33	.35	.33	.35	.33	.35
†122-124 White Crude Scale Wax	.03	.03¼	.03	.03¼	.03	.03¼
†124-126 White Crude Scale Wax	.03	.03¼	.03	.03¼	.03	.03¼

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.07	.07½	.07	.07½	.07	.07½
No. 3 color, 200 vis., pale oil	.09	.09½	.09	.09½	.10	.10½
No. 3 color, 300 vis., pale oil	.10	.10½	.10	.10½	.10½	.11
No. 3½ color, 500 vis., pale oil	.11½	.12	.11½	.12	.12½	.13
No. 4 color, 750 vis., pale oil	.14½	.15	.14½	.15	.15	.15½
No. 5 to 6 color, 200 vis., red oil	.07¼	.07¾	.07¼	.07¾	.07¾	.08¼
No. 5 to 6 color, 300 vis., red oil	.09	.09½	.09	.09½	.09	.09½
No. 5 to 6 color, 500 vis., red oil	.10	.10½	.10	.10½	.11	.11½
No. 5 to 6 color, 750 vis., red oil	.13	.13½	.13	.13½	.13½	.14
No. 2 color, 200 vis., pale filtered	.12¾	.14	.12¾	.14	.12¾	.14
No. 2 color, 300 vis., pale filtered	.14	.14½	.14	.14½	.14	.14½



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

No. 2½ color, 500 vis., pale filtered	.15½	.16½	.15½	.16½	.15½	.16½
No. 2½ color, 750 vis., pale filtered	.20	.20½	.20	.20½	.20	.20½
CALIFORNIA—						
130 vis., 2½-3 color	.10½	.11	.10½	.11	.10½	.11
200 vis., 2½-3 color	.11	.11½	.11	.11½	.11	.11½
300 vis., 3 -3½ color	.11½	.12	.11½	.12	.11½	.12
350 vis., 3½-4 color	.12	.13	.12	.13	.12	.13
400 vis., 3½-4 color	.13	.15½	.13	.15½	.13	.15½
Red Neutral:						
200 vis., 4½-5 color	.09½	.10½	.09½	.10½	.09½	.10½
300 vis. 5 -6 color	.10½	.11	.10½	.11	.10½	.11
400 vis., 5 -6 color	.12	.13	.12	.13	.12	.13½
500 vis., 4½-5 color	.13½	.14½	.13½	.14½	.13½	.14½
500 vis., 5 -6½ color	.12½	.13½	.12½	.13½	.12½	.13½
600 vis., 6 plus color	.13½	.14½	.13½	.14½	.13½	.14½

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Aug. 23	Aug. 16	Aug 9
Gasoline, U. S. Motor, 58-60 437	.08¼	.08¼	.08½
Kerosene, water white, 41-43	.06½	.06½	.06¾ .07
*Fuel, Oil bunker "C," 14-16, per bbl	1.65	1.65	1.65
*Fuel Oil, Diesel, 28-30, per bbl	2.10	2.10	2.00
Gas Oil, 28 plus	.05½	.05½	.05½
25 pale Paraffin Oil	.12	.12	.12
28 pale Paraffin Oil	.07¼	.07¼	.07¼
285 red Paraffin Oil	.12½	.12½	.12½
250 red Paraffin Oil	.11½	.11½	.11½
225 red Paraffin Oil	.10½	.10½	.10½
200 red Paraffin Oil	.09½	.09½	.09½
Refined Wax:			
120-122 a.m.p., per lb.	.03⅞	.03⅞	.03⅞
125-127 a.m.p., per lb.	.04	.04	.04
130-132 a.m.p., per lb.	.04½	.04½	.04½
135-137 a.m.p., per lb.	.05½	.05	.05
Petrolatum, in bbls., carload lots, per lb:			
Dark green	.01¾	.01¾	.01¾
Amber	.03¼	.03¼	.03¼
Extra amber	.03¼	.03⅝	.03⅝
Cream	.05¾	.05⅞	.05⅞
Lily white	.07¼	.07	.07
Snow white	.08¼	.08	.08

*Lighterage 6.5c a bbl. extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Aug. 23	Aug. 16	Aug 9
Gasoline, U. S. Motor, 58-60 437, in cases	.2440	.2440	.2440
Kerosene, standard white, in cases	.1615	.1615	.1615
Kerosene, water white, in cases	.1715	.1715	.1715
600 steam refined cylinder stock, in bbls	.17	.17	.17
635 steam refined	.19	.19	.19
650 steam refined	.20	.20	.20
600 Pennsylvania flash	.24	.24	.24
630 Pennsylvania flash	.32	.32	.32
600 Warren E	.26	.26	.26
600 Oil City E	.24½	.24½	.24½
Light 135 Bright Stock	.42	.42	.42
Dark 135 Bright Stock	.40	.40	.40

LOS ANGELES EXPORT PRICES

	Aug. 23		Aug. 16		Aug 9	
Kerosene, water white	.04⅛	.04⅜	.04⅛	.04⅜	.04⅛	.04⅜
U. S. Motor Gasoline, 53-55 437 e.p.	.06	.06½	.06	.06½	.06¼	.06¾

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

*Corsicana heavy (March 14, 1927).... $1.00
Other fields .....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

*Carson County .....$ .75
*Hutchinson County 75
Gray County.....See gravity table

*Humble Oil & Refining Co., August 23.

WEST TEXAS

*Iatan (same as North Texas).
Crane-Upton-Crockett.....See gravity table

*Includes Howard County and Westbrook Fields. Kay County Gas Co. pays $1.05 for Howard County crude, effective May 21.

ARKANSAS-NORTH LOUISIANA

Cotton Valley (March 17) $1.00
Bellevue (Feb. 24, 1927) 1.25
Urania (March 16, 1927) 1.00
East El Dorado (March 16) 1.00
Other fields .....See gravity table

Note—Cotton Valley and Bellevue, Standard Oil Co. of Louisiana, Gulf Refining Co. and Magnolia Petroleum Co.; Urania, Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co.

GULF COAST

(Goose Creek, Hull, Liberty, West Columbia, Orange, Boling, Sour Lake, Humble, High Island, Pierce Junction and Spindletop).

†Grade A, (March 14) $1.20
Grade B. .....See gravity table
‡Jennings, La. (March 14) 1.05
‡Saratoga, Batson, Dayton (March 14, 1927) 1.20
**Markham (March 14) 1.00

*Gulf Pipe Line Co. †Sun Pipe Line Co. ‡Humble Oil & Refining Co. and other major buyers. **The Texas Company.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

*Luling (May 5) $1.00
†Mirando (March 14) 1.00
Rockdale-Minerva (April 15):
38-38.9 gravity 1.27
39-39.9 gravity 1.29
40 and above 1.31
*Thrall .....
Callihan (May 15) 1.75
Lytton Springs (Lockhart) See gravity table
Somerset .....See gravity table

*Posted by Magnolia Petroleum Co. Thrall prices same as north central Texas less 19½ cents per cwt. freight.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.
*2 cents differential per degree above 37.9 gr. to 40 and above at $1.31

ROCKY MOUNTAIN STATES
Ohio Oil Co.-Midwest Refining Co.
(Effective March 14)

Rock Creek, Wyo. (March 12) $1.25
Salt Creek .....See gravity table
Big Muddy (March 12) 1.25
Mule Creek (May 1) 1.10
Grass Creek, heavy ..... .90
Grass Creek, light 1.32
Elk Basin (March 12) 1.32
Lance Creek (March 12) 1.32
Poison Spider 1.00
Notches ..... .65
Rex Lake (February 22) 1.10
Osage 1.32
Lost Soldier (contract) ..... .95
Greybull-Torchlight 1.32
Hamilton Dome ..... .85
Cat Creek (Mont.) 1.32
Sunburst (Mont.) 1.35
Artesia (March 12) 1.00
Hogback (N. Mex.) (March 14) 1.35

Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

(Continued on Page 152)

CALIFORNIA CRUDE PRICES
*Standard Oil Co.-Union Oil Co. (Effective April 1, 1927)

Gravity—	Fullerton, Seal Beach, Long Beach, Huntington Beach, Richfield, Rosecrans-Dominguez, Torrance-Inglewood 1	Whittier, La Habra, Montebello 2	Kern River, Newhall-McKittrick, Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills 3	Coyote 4	Santa Fe Springs 5	Coalinga 6	Wheeler Ridge 7	Santa Maria, Ventura, Orcutt, Salt Lake 8
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.85	.85	.75	.85	....	.75	.75	.85
16°	.85	.85	.75	.85	....	.75	.75	.85
17°	.85	.85	.75	.85	....	.75	.75	.85
18°	.85	.85	.75	.85	....	.75	.75	.85
19°	.85	.85	.75	.85	....	.75	.75	.85
20°	.86	.85	.77	.85	....	.76	.76	.85
21°	.86	.85	.79	.86	.85	.77	.77	.85
22°	.87	.85	.81	.87	.86	.78	.78	.85
23°	.88	.85	.82	.88	.85	.79	.79	.85
24°	.89	.85	.85	.89	.85	.80	.80	.85
25°	.90	.86	.87	.90	.86	.81	.81	.86
26°	.92	.87	.89	.91	.87	.83	.82	.87
27°	.94	.88	.91	.93	.88	.85	.83	.88
28°	.96	.89	.93	.95	.87	.87	....	.89
29°	.98	.90	.96	.94	.91	.89	....	.91
30°	1.00	.91	.99	.95	.93	.91	....	.93
31°	1.03	....	1.02	....	.95	.93	....	.95
32°	1.06	....	1.05	....	.97	.95	....	.97
33°	1.09	....	1.08	....	.99	.97	....	.99
34°	1.12	....	1.11	....	1.01	.99	....	1.01
35°	1.15	....	....	....	1.03	1.01	....	1.03
36°	1.18	....	....	....	1.06	....	....	1.06
37°	1.21	....	....	....	1.09	....	....	1.09
38°	1.24	....	....	....	1.12	....	....	1.12
39°	1.27	....	....	....	1.15	....	....	1.15
40°	1.30	....	....	....	....	....	....	....
41°	1.33	....	....	....	....	....	....	....
42°	1.36	....	....	....	....	....	....	....

*Column 1—Long Beach, Seal Beach and Huntington Beach crudes, 14 to 22 degrees, inclusive; Richfield and Fullerton, 14 to 30 degrees; Torrance and Inglewood, 14 to 28 degrees; Dominguez, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.

Column 2—Whittier crude, 14 to 22 degrees; Montebello, 14 to 30 degrees.

Column 3—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset, Buena Vista and Elk Hills, 14 to 33 degrees; Lost Hills and Belridge, 14 to 34 degrees.

Column 4—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees; Ventura and Orcutt, 14 to 39 degrees. Posted only by Union Oil Co.

CRUDE OIL GRAVITY PRICE TABLE

Gravity—	Okla., Kans., N. C. Tex., La.-Ark. 1	Smackover, Ark. 2	Stephens, Ark. 3	Gray County (Texas Panhandle) 4	Crane, Upton, Pecos, Crockett Counties (West Texas) 5	Salt Creek, Wyo. 6	Grade B & Light Crude (G. Coast) 7	Somerset, (South Central Texas) 8
Below 24	....	1.00	....	....	....	....	....	....
24 and above	....	1.25	....	....	....	....	....	....
Below 25	....	....	....	....	....	....	1.15	....
25 to 25.9	....	....	....	....	....	....	1.17	....
Below 26	....	....	....	....	.60	....	....	....
26 to 26.9	....	....	....	....	.60	....	1.19	....
27 to 27.9	....	....	....	....	.60	....	1.21	....
Below 28	****	....	1.00	....	....	....	....	....
28 to 28.9	1.12	....	1.02	.80	.60	....	1.23	....
29 to 29.9	1.14	....	1.04	.82	.60	1.14	1.25	....
30 to 30.9	1.15	....	1.06	.84	.60	1.16	1.27	....
31 to 31.9	1.18	....	1.08	.86	.60	1.18	1.29	....
32 to 32.9	1.20	....	1.10	.88	.60	1.20	1.31	1.05
33 to 33.9	1.22	....	....	.90	.60	1.22	1.33	1.07
34 to 34.9	1.24	....	....	.92	.60	1.24	1.35	1.09
35 to 35.9	1.26	....	....	.94	.60	1.26	1.37	1.11
36 to 36.9	1.28	....	....	.96	.60	1.28	....	1.13
37 to 37.9	1.30	....	....	.98	....	1.30	....	1.15
38 to 38.9	1.32	....	....	1.00	....	....	....	1.17
39 to 39.9	1.34	....	....	1.02	....	....	....	....
40 to 40.9	1.36	....	....	1.04	....	....	....	....
41 to 41.9	1.38	....	....	1.06	....	....	....	....
42 to 42.9	1.40	....	....	1.08	....	....	....	....
43 to 43.9	1.42	....	....	1.10	....	....	....	....
44 to 44.9	1.44	....	....	1.12	....	....	....	....
45 to 45.9	1.46	....	....	....	....	....	....	....
46 to 46.9	1.48	....	....	....	....	....	....	....
47 to 47.9	1.50	....	....	....	....	....	....	....
48 to 48.9	1.52	....	....	....	....	....	....	....
49 to 49.9	1.54	....	....	....	....	....	....	....
50 to 50.9	1.56	....	....	....	....	....	....	....
51 to 51.9	1.58	....	....	....	....	....	....	....
52 and above	1.60	....	....	....	....	....	....	....

Column 1—Magnolia Petroleum Co. posted new schedule May 5, making price below 38 gravity $1.05 per barrel, with 2 cents increase per degree higher in gravity, taking 33-33.9 gravity at $1.07 as basis, with a top price of $1.45 for 52 and above.

Oklahoma: Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., March 12; Carter Oil Co., The Texas Company, March 14.

North Central Texas—(Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs (Southwest Texas), Iatan and Panola (Magnolia only), Currie, Nocona, Moran and Corsicana light); Texas, Prairie, Sinclair and Gulf, March 12; The Texas Company, Humble Oil & Refining Co., March 14.

Kansas—Prairie, Sinclair, March 12; Carter, Texas, March 14.

Arkansas and North Louisiana—(Caddo, Bull Bayou, Crichton, DeSoto, Haynesville, Homer and El Dorado only); Standard Oil Co. of Louisiana, March 14; The Texas Company, March 14; Magnolia Petroleum Co., Pine Island, Haynesville and Bull Bayou, El Dorado, Gulf Pipe Line Co., March 14.

Column 2—Standard Oil Co. of Louisiana, The Texas Company, Gulf, Atlantic, March 17, Magnolia Petroleum Co. (March 16) posted price of $1 for below 24 degrees and $1.15 for 24 and above. Louisiana Oil Corp., July 6 and Atlantic Oil Producing Co., July 7.

Column 3—Atlantic Oil Producing Co., March 14.

Column 4—Humble Oil & Refining Co. and Gulf Pipe Line Co., March 14.

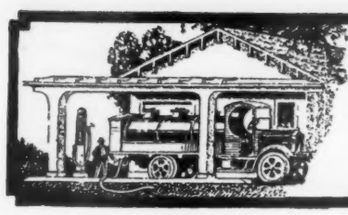
Column 5—Humble Oil & Refining Co., August 23.

Column 6—Midwest Refining Co., March 12. All crude over 37 gravity, $1.30 per barrel.

Column 7—Humble Oil & Refining Co. and other major buyers (schedule ends "35 and above"), March 14, with exception of Magnolia Petroleum Co., which stops at 31 degrees gravity. Sun Pipe Line Co. posts 2 cents differential for each degree above 35 gravity and $1.47 for 40 gravity and above.

Column 8—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

****Prices for crude below 28 gravity; Oklahoma, Kansas and Texas, Magnolia Petroleum Co., $1.10, March 12; Arkansas, North Louisiana, March 14. Other companies, 2 cents less for each degree with exception of Humble Oil & Refining Co., which pays $1.12 for crude below 28 degrees gravity.



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns Aug. 23.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
Chicago dist.	16.0	18.0	2.0	12.0
Decatur, Ill.	16.2	18.2	2.0	12.1
E. St. Louis	15.1	17.35	2.0	11.2
Joliet	16.4	18.4	2.0	12.3
Peoria	13.0	14.0	2.0	12.1
Quincy	16.2	18.2	2.0	8.9
Davenport, Ia.	17.5	19.5	3.0	12.3
Des Moines	17.0	19.0	3.0	12.3
Keokuk	17.5	19.5	3.0	12.3
Sioux City	17.1	19.1	3.0	11.9
Duluth, Minn.	15.5	17.5	2.0	12.9
Minneapolis	14.0	14.0	2.0	12.9
Mankato	17.1	19.1	2.0	12.7
LaCross, Wis.	17.2	19.2	2.0	13.0
Milwaukee	16.1	18.1	2.0	11.9
Madison	16.3	18.3	2.0	12.1
Detroit, Mich.	16.8	18.8	2.0	12.7
Grand Rapids	16.7	18.7	2.0	13.6
Saginaw	16.9	18.9	2.0	13.6
Evansville, Ind.	17.0	19.0	3.0	13.0
Ft. Wayne	17.4	19.4	3.0	13.4
Indianapolis	17.2	19.2	3.0	13.2
South Bend	17.4	19.4	3.0	13.4
Fargo, N. D.	17.0	19.0	2.0	14.9
Huron, S. D.	19.5	21.5	4.0	13.9
Sioux Falls	15.0	17.0	4.0	13.4
K. C., Mo.	14.9	16.9	3.0	10.6
*Springfield	16.8	18.8	3.0	11.5
*St. Louis	15.6	17.9	2.5	11.3
*St. Joseph	16.5	18.5	3.0	11.2
Wichita, Kans.	14.8	16.8	2.0	10.8
Bartlesville, Ok.	15.8	17.8	3.0	10.8

NAPHTHAS

	Tank wagon	Tank car
Oleum spirits	16.0	10.75
V. M. & P. naphtha	18.0	12.75
Cleaner's naphtha	18.0	13.75
Stanisol	19.0	14.75

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL

Less than 100 gallons	9.0
100 to 799 gallons	8.0
800 or more gallons	7.5

Tank wagon prices of gasoline subject to discount of 1 cent a gallon on dumps of 50 gallons or more throughout territory except Chicago district where discount applies only to dumps of 100 gallons. Kerosene subject to 1 cent discount on dumps of 50 gallons or more.

Outside the Chicago district, the following quantity discount schedule is in effect on monthly tank wagon deliveries of gasoline: 6,000 gallons or more, 1½ cents; 10,000 gallons or more, 2 cents; 15,000 gallons or more, 3 cents. These discounts include the 1 cent allowed on dumps of 50 gallons or more at one delivery.

Within the Chicago district, the following quantity discount schedule is in effect on tank wagon deliveries of gasoline: 750 to 2,000 gallons, one-half cent; 2,000 to 3,000 gallons, three-fourths cent; 3,000 to 6,000 gallons, 1 cent; 6,000 to 10,000 gallons, 1½ cents; 10,000 to 15,000 gallons, 2 cents; 15,000 gallons or more, 3 cents. These discounts are in addition to the special discount of 1 cent on dumps of 100 gallons or more at one delivery.

If the quantity bought during the year is equal to or exceeds 12 times the agreed monthly quantity, the discount is paid or credited on the entire quantity at the close of the term less the monthly payments made during the year.

*State tax 2 cents; remainder city tax.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
All Ohio points	19.0	21.0	3.0	14.5

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.*

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
Dallas, Tex.	14.0	17.0	3.0	11.0
Fort Worth	14.0	15.0	3.0	10.0
Houston	14.0	17.0	3.0	15.0
San Antonio	14.0	16.0	3.0	11.0
El Paso	16.0	18.0	3.0	16.0
Texarkana	15.0	18.0	3.0	12.0
Muskogee, Ok.	15.0	18.0	3.0	9.0
Okla. City	15.0	18.0	3.0	9.0
Tulsa	15.0	18.0	3.0	9.0
Ft. Smith, Ark.	16.0	17.0	5.0	12.0
Little Rock	18.0	21.0	5.0	12.0

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, one-half cent; over 2,000 gallons, three-quarters cent; over 3,000 gallons, 1 cent; over 4,500 gallons, 1¼ cents; over 6,000 gallons, 1½ cents; over 8,000 gallons, 1¾ cents; over 10,000 gallons, 2 cents. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1 cent; over 300 gallons a month, 1¼ cents; over 400 gallons, 1½ cents; over 500 gallons a month, 1¾ cents; over 600 gallons, 2 cents. The same rule applies for annual purchases in the tank wagon discounts.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
*N. Orleans, La.	15.5	18.5	3.0	14.0
Baton Rouge	14.0	17.0	2.0	12.5
Alexandria	15.0	18.0	2.0	14.0
LaFayette	15.0	18.0	2.0	13.5
Lake Charles	14.5	17.0	2.0	12.5
Shreveport	15.5	18.5	2.0	13.0
Kn'xville, T'nn.	19.5	22.5	3.0	15.0
Memphis	15.0	18.0	3.0	14.0
Chattanooga	19.5	22.5	3.0	15.0
Nashville	18.0	21.0	3.0	15.0
Bristol	19.0	22.0	3.0	14.0
Lit. Rock, Ark.	18.0	21.0	5.0	12.0

*Tax of 3 cents includes city tax of 1 cent.
•Louisiana kerosene prices include 1-cent state tax and 1-cent parish tax.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
Atlanta, Ga.	18.0	21.0	4.0	15.0
Augusta	18.0	19.0	4.0	16.0
Macon	19.0	22.0	4.0	16.0
Savannah	16.0	18.0	4.0	14.0
Birm'h'm, Ala.	18.0	21.0	4.0	15.5
Mobile	17.0	20.0	4.0	15.0
Montgomery	19.0	22.0	5.0	16.5
Clarks'le, Miss.	17.0	20.0	4.0	12.5
Jackson	17.0	20.0	4.0	13.5
Natchez	16.5	19.5	4.0	14.0
Gulfport	18.5	21.5	6.0	14.0
Vicksburg	16.5	19.5	4.0	14.0
Jack'ville, Fla.	15.0	18.0	5.0	14.0
Miami	17.0	20.0	5.0	15.5
Pensacola	16.0	19.0	5.0	15.0
Tampa	14.0	17.0	5.0	14.0
Lexingtan, Ky.	18.0	21.0	5.0	15.5
Covington, Ky.	19.0	22.0	5.0	15.5
Louisville	19.0	22.0	5.0	15.0

In addition to the state tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Prices in Georgia include one-half cent inspection fee on gasoline and kerosene; in Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene only. Pensacola tax includes 1 cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
Pittsburgh, Pa.	16.0	*22.0	...	14.0
Philadelphia	14.0	17.0	...	14.0
Scranton	16.0	*22.0	...	14.0
Allentown	16.0	*22.0	...	14.0
Altoona	16.0	*22.0	...	14.0
Erie	14.0	*18.0	...	14.0
Dover, Del.	19.0	22.0	3.0	14.0
Wilmington	19.0	22.0	3.0	14.0
Spring'd, Mass.	17.0	17.0	...	15.0
Worchester	17.0	17.0	...	15.0
Boston	17.0	17.0	...	15.0
rovidence, R.I.	19.0	19.0	2.0	15.0
Hartford, Conn.	21.0	22.0	2.0	15.0
New Haven	21.0	22.0	2.0	15.0

*Includes tax of 3.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the state.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
Albany, N. Y.	17.0	19.0	...	15.0
*New York	17.0	19.0	...	15.0
Buffalo	17.0	19.0	...	14.0
Rochester	13.0	16.0	...	14.0
Syracuse	17.0	19.0	...	15.0
Boston, Mass.	17.0	19.0	...	15.0
Augus a, Me.	20.0	26.0	3.0	15.0
M'nch't'r, N.H.	17.0	21.0	2.0	15.0
Burlington, Vt.	19.0	21.9	2.0	15.0

*Price in steel barrels.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
San Francisco	17.0	21.0	3.0	15.5
Pueblo	18.0	18.0	3.0	15.5
Los Angeles	16.5	20.5	3.0	15.5
Reno, Nev.	22.0	26.0	4.0	19.0
Portland, Ore.	17.5	21.5	3.0	16.5
Seattle, Wash.	16.5	20.5	2.0	16.5
Tacoma	16.5	20.5	2.0	16.5
Spokane	20.5	24.5	2.0	20.5
Phoenix, Ariz.	22.0	26.0	3.0	20.5

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
Atlantic City	18.0	...	2.0	14.0
Newark, N. J.	18.0	20.0	2.0	14.0
Annapolis, Md.	20.0	23.0	4.0	12.0
Baltimore	20.0	23.0	4.0	10.0
Cumberland	20.0	23.0	4.0	14.0
Wash'ngton	18.0	21.0	2.0	12.0
Danville, Va.	20.5	...	4.5	14.0
Norfolk	20.5	20.5	4.5	12.0
Petersburg	20.5	23.5	4.5	14.0
Roanoke	20.5	23.5	4.5	14.0
Richmond	20.5	23.5	4.5	14.0
Ch'rist'n, W.Va.	20.0	23.0	4.0	13.0
Keyser	20.0	...	4.0	14.0
Parkersburg	17.0	20.0	4.0	14.0
Wheeling	20.0	23.0	4.0	14.0
Charlotte, N. C.	20.0	23.0	4.0	14.0
Hickory	20.0	23.0	4.0	14.0
Mt. Airy	20.0	23.0	4.0	14.0
Salisbury	20.0	23.0	4.0	14.0
Char'stn, S. C.	20.0	23.0	5.0	14.0
Columbia	20.0	20.0	5.0	14.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
Omaha	14.25	16.25	2.0	12.25
McCook	14.75	14.75	2.0	11.50
Norfolk	16.75	18.75	2.0	12.75
N. Platte	17.75	19.75	2.0	13.50
Scottsbluff	17.25	19.25	2.0	13.00

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wag'n	Service station	Incids tax of	Tank wag'n
Denver, Colo.	18.0	20.0	2.0	14.5
Pueblo	18.0	20.0	2.0	14.5
Grand Junction	21.5	23.5	2.0	18.0
Casper, Wyo.	18.0	20.0	3.0	12.0
Cheyenne	19.0	21.0	3.0	14.5
Butte, Mont.	22.0	22.0	3.0	19.0
Helena	22.5	24.5	3.0	19.0
Salt Lake, Utah	21.0	23.0	3.5	17.0
Boise, Idaho	23.5	25.5	4.0	19.0
Twin Falls	23.5	25.5	4.0	19.0
Albu'que, N. M.	21.0	24.0	5.0	17.0

TANK WAGON CHANGES

August 11—Standard Oil Co. of Kentucky reduced the gasoline tank wagon and station prices 3 cents in Florida. The kerosene tank wagon price was reduced 1 cent in Jackson, Miss., and Tampa., Fla.; one-half cent in Pensacola, Fla., and increased 1½ cents in Miami, Fla.

August 17—Standard of Indiana increased the gasoline tank wagon and station prices 1.7 cents in Grand Rapids, Mich.

August 18—Continen al Oil Co. increased the gasoline tank wagon price 1 cent and station price 3 cents in Pueblo, Colo.

August 20—Standard Oil Co. reduced the gasoline tank wagon price to 15 cents and station price to 17 cents, or reduced these 3.1 cents in Sioux Falls, S. D.

August 22—Magnolia Petroleum Co. reduced the gasoline tank wagon price 1 cent and the station price 2 cents in Texas, except in Dallas, where the station price was reduced 1 cent.

CRUDE CHANGES

August 23—Joseph Seep Purchasing Agency reduced Pennsylvania grade oil in Buckeye Pipe Line lines 10 cents, making the new price $2.25.

August 23—Humble Oil & Refining Co. reduced all grades of Pecos, Crane, Upton and Crockett County crudes to flat price of 60 cents. Carson, Hutchinson and Wheeler County crudes were reduced to flat 75 cents. Gray County crude remained unchanged.

NORTH TEXAS MARKET AIDED BY EXPORT ORDER

WICHITA FALLS, Tex., Aug. 22.—A 750,000-gallon order of export gasoline made in Wichita Falls late Monday afternoon was the brightest spot in the North Texas market during the past week. The order was for 64-66 390 gasoline and for immediate shipment. The order was reported booked at 6½ cents and it gave strength to the other refined gasolines.

The market for U. S. Motor grade gasoline dragged through the week and the local spot market slumped to some extent with the announcement of cuts of from 1 to 2 cents in gasoline tank wagon prices in several Texas cities. Practically all of the buying in refined gasoline during the past week was in export material.

Stocks of Wichita Falls refiners consist principally of U. S. Motor gasoline and the export buying on Monday is expected to relieve that congested condition to some extent. Refiners were not running much of the higher gravity gasoline and will run more to higher gravities to fill the Monday export order. The gravity of that particular order will not necessarily have to be 64-66 and it is reported it can be filled with 61-63 390 gasoline.

Natural gasolines continued to hold their strength with considerable activity in that market the latter part of last week. While the price of that product was expected to drop during the past week the continued activity in naturals kept them in a firm position.

Kerosenes showed some strength at the end of the week when a Fort Worth refiner sold 75 cars, but at the opening of the current week there was only a slight change in the price structure. That change did not indicate an upward trend, but gave the product a little wider price spread.

Fuel oil appeared to be in a little better position to most refiners and they believe that 80 cents is its bottom. No big buying in fuel during August caused the product to slip. However, in Wichita Falls railroads and others have been doing considerable small lot buying. Inquiries for fuel oil were on the increase during the past week.

Gas oil was weaker and there was little change in distillate.

CRUDE OIL PRICES

(Continued from Page 151)

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective April 13)

Penna Grade Oil in New York Transit Line (New York)	$2.65
Bradford District Oil in National Transit Lines (Pennsylvania)	2.65
Penna Grade Oil in National Transit Lines (Pennsylvania)	2.55
Penna Grade Oil in Southwest Pennsylvania Lines (West Virginia)	2.55
Penna Grade Oil in Eureka Pipe Line lines (Pennsylvania)	2.50
Penna Grade Oil in Buckeye Pipe Line lines (Ohio) (August 23)	2.25
Cabell Grade Oil in Eureka Pipe Line lines (West Virginia) March 16	1.40
Corning 35-cent grade oil in Buckeye Pipe Line Co.'s line (March 17)	1.35
Corning 25-cent grade oil in Buckeye Pipe Line Co.'s lines (March 17)	1.45
Somerset Oil in Cumberland Pipe Line lines (Kentucky) March 16	1.50
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky)	.95
Keister (Pennsylvania)	1.10

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective March 14)

Lima	$1.71
Wooster	1.57
**Saginaw, Mich., Saginaw Sand (May 27)	2.05
Illinois	1.60
Indiana	1.48
Princeton	1.60
Plymouth	1.33
Waterloo (Nov. 17, 1926)	1.35
•Western Kentucky	1.33
**Saginaw, Mich., Berea Sand (May 27)	1.95
†Cumberland, Barren, Clinton and Monroe Counties, Kentucky (March 16)	1.50
‡Oil in lines of Stoll Oil Refining Co. in Oil City, Ky. (March 16, 1927)	1.50
†Clay County, Tennessee (Nov. 18)	2.35
§Oil Springs (Canada)	2.18
§Petrolia (Canada)	2.11

•Posted by Ohio Oil Co.
†Posted by Paragon Development Co.
‡Posted by Stoll Oil Refining Co.
§Posted by Imperial Oil Co., Ltd.
**Posted by Sun Oil Co.

MEXICAN CRUDE

Note—Due to the fact that the exportation of Tuxpam light crude oil has become a negligible factor, prices will no longer be published.

•Panuco heavy (f.o.b Mex. ports)	$1.15

•17.496c tax.

This Sign brings the motorist in!

and the Sinclair method of recommending Opaline brings him back!

Authorized Dealer

SINCLAIR OPALINE MOTOR OIL

REG. U. S. PAT. OFF.

Seals Power at every Degree of Wear

DISPLAY this sign outside your station—you tell your motoring world that you sell not just oil but *CORRECT LUBRICATION!* If you are an Authorized Opaline Dealer, you will ask a motorist to look at his speedometer and tell you how many miles his car has been driven, then you will consult the Sinclair Recommendation Index, and give him the right grade of Opaline to fit the degree of wear in his engine and seal its power!

That is the Sinclair Law of Lubrication in operation. That's the commonsense method of correct lubrication which brings the motorist in—and brings him back. Let us tell you how we co-operate with Authorized Opaline Dealers in building profitable business.

SINCLAIR REFINING COMPANY, INC.
Also Makers of Sinclair Gasoline and H-C Gasoline
45 NASSAU STREET, NEW YORK
Atlanta Boston Chicago Houston Kansas City

Entire contents copyrighted 1927 by Sinclair Refining Company, Inc.

Oil Securities Inactive During Week

Illinois Pipe Line Touches New High. Price Reductions in West Texas Cancel Fractional Advances

The oils as a group did very little during the past week. Illinois Pipe Line touched a new high with the prospects of transporting the Pecos County Texas crude through its lines, now under construction.

There were fractional advances which showed a relation to the decline of the Seminole, Okla., Field, but with the price reductions in the Texas Panhandle and West Texas Fields, these were lost.

Sinclair Consolidated

The consolidated net earnings of the Sinclair Consolidated Oil Corp. for the seven months ended July 31, 1927, with July estimated, were approximately $20,100,000 available for interest, reserves and surplus.

The s atement of the Sinclair Consolidated Oil Corp. ond subsidiaries as of June 30, 1927 (after giving effect to the issuance of $20,000,000 three-year 6 per cent gold bonds, series D, and redemption of $12,350,000 three-year collateral 6 per cent gold bonds, series C), shows current assets of $55,841,399, comparing with $52,568.659 on December 31, 1926, and current liabilities of $19,471,551, against $19.818.425.

The consolidated balance sheet of the Sinclair Consolidated Oil Corp. and subsidiaries as of June 30, 1927, after giving effect to the financing outlined in the preceding paragraph, compares as follows:

	June 30, '27	Dec. 31, '26
Real est., leases, pipe lines, etc..	*$253,364,094	*$242,259,418
Investments	61,271,367	60,855,058
Special funds	3,468,421	2,376,285
Cash	7,641,800	5,726,437
Accts. and notes receivable	14,040,007	14,414,634
Empl. stock sub.	422,188	438,187
Inventories	31,504,202	29,805,546
Advances, etc.	185,978	167,832
Marketable secs.	†2,047,224	2,016,024
Deferred charges	5,670,415	6,757,811
Total	$379,615,696	$364,817,232
Liabilities		
Common stock	‡$204,414,529	$204,414,529
Surplus	$41,660,065	28,927,232
Preferred stock	16,907,000	17,210,000
Minority int. subs.	109,790	109,790
Ins. and misc. reserve	3,162,505	6,277,471
Funded debt	92,028,000	85,756,600
Purc. money oblig.	1,862,255	2,303,184
Notes payable	2,650,600	2,000,000
Accts. payable	13,950,566	14,965,969
Accrd. Int., etc.	2,870,387	2,852,457
Total	$379,615,696	$364,817,232

*After reserve for depreciation, depletion and amortization amounting to $110,978,853 in 1927 and $111,938,149 in 1926. †Includes bonds and stocks of company, at cost. ‡Before provision for current year's reserves. §Represented by 4,509,481 no par shares.

National Supply

National Supply Co. of Delaware and subsidiaries report for the six months ended June 30, 1927, net income of $1,725.018 after charges and Federal taxes, equivalent after 7 per cent preferred dividend requirements, to $5.55 a share (par $50) earned on 265,900 shares of common stock. This compares with $1.695,459, or $5.44 a share, in the first six months of 1926.

Net income for the June quarter was $400,531 after the above charges, equal to $1.04 a share on the common, compared with $1,324,487, or $4.51 a share, on the common in the preceding quarter.

The consolidated income account for the six months ended June 30, 1927, compares with 1926 as follows:

	Six Months Ended June 30 1927	1926
Gross	$4,798,393	$4,326,356
Expenses	2,466,259	2,223,637
Oper. profit	$2,332,134	$2,102,719
Other income	364,117	479,687
Total income	$2,696,251	$2,582,406
Other deductions	647,710	570,602
Federal taxes	323,523	316,345
Net income	$1,725,018	$1,695,459

The consolidated income account for the quarter ended June 30, 1927, follows: Gross, $1,900.192; expenses, $1,230.694; operating profit, $669,498; other income, $185,161; total income, $854,659; other deductions, $372,118; Federal taxes, $82,010; net income, $400.531.

The balance sheet of the National Supply Co. of Delaware and subsidiaries as of June 30, 1927, compares as follows:

Assets	1927	1926
*Land, bldgs., etc.	$ 6,963.377	$ 7,042.120
Cash and call loans	5,046.652	4,179.954
Notes receivable	2,538.891	2,245,209
Accts. receivable	10,214,328	9,658.274
Inventories	15,063.469	12,436.226
Treasury stock	210,514	281.259
Short term invest.	..	1,540.960
Misel. investment	59,502	67.294
Deferred charges	48,719	67,803
Total	$40,145,452	$37,519,099
Liabilities		
Preferred stock	$ 7.095,100	$ 7,095,100
†Common stock	13,295,000	13,295,000
Union Tool mortg. bonds	..	85,500
Accounts payable	2,466,405	3,071.354
Accrued wages, etc.	240.535	218.698
Accrued Fed. taxes	323.523	378.293
‡Federal taxes	407,776	..
Insur. and pens. res.	998.420	571.078
Surplus	15,318,693	12,804,076
Total	$40,145,452	$37,519,099

*After depreciation. †Par $50. ‡Payable in 1927.

Derby Oil & Refining

The Derby Oil & Refining Corp. for the quar.er ended June 30, 1927, reports net profit of $2,158 after expenses, depreciation, depletion, etc., comparing with net loss of $75,837 after above charges and inventory adjustments in the quarter ended March 31, 1927. For the six months ended June 30, 1927, net loss totaled $73,678 after expenses, deprec'ation, depletion, inventory adjustments, etc.

Wilcox Oil & Gas

H. F. Wilcox Oil & Gas Co. reports for the six months ended June 30, 1927, profit of $1,110 562 af.er expenses and fixed charges, but before depreciation, depletion and Federal taxes.

Pennok Oil

The Pennok Oil Corp. reports for the six months ended June 30, 1927, net income of $43 099 after interest, pepreciation, depletion and Federal taxes, equivalent to 28 cents a share earned on 150,000 shares of no par value stock. This compares with $179.942 or $1.20 a share in the first half of 1926.

Net income for the second quarter of 1927 was $7,930 after the above charges, equal to 5 cents a share, comparing with $35,169 or 23 cents a share, in the preceding quarter and $82,689 or 55 cents a share, in the June quarter of the previous year.

The income account for the six months ended June 30, 1927, compares as follows:

	1927	1926
Sales of oil	$216.990	$516,153
Expenses	128,259	160,704
Balance	$ 88.731	$355,449
Other income	41,534	62,573
Total income	$130.265	$418,022
Interest	13,987	20,190
Depr., depl., Fed. taxes	73,179	217,890
Net income	$ 43.099	$179.942
Dividends	75.000	150.000
Deficit	$ 31,901	$*29.942

*Surplus.

Oil Well Supply

The report of the Oil Well Supply Co. and subsidiaries for the six months ended June 30, 1927, shows net income of $726,860 after depreciation, Federal taxes, etc., equivalent after allowing for dividend requirements on 7 per cent preferred stock, to $1.34 a share (par $25) earned on 365,625 shares of common s ock. This compares with $929.532 or $2 11 a share on 325.000 shares in the first six months in 1926.

The consolidated income account for the six months ended June 30, 1927, compares with the same period of 1926 as follows:

	1927	1926
Gross from operations	$2,838.092	$3,208,716
Expenses and depr.	2,271,090	2,288,319
Profit	$ 567,002	$ 920,397
Other income	650,339	230,313
Total income	$1,217,341	$1,150,710
Federal taxes	115.431	129.824
Other deductions	375,050	91,354
Net income	$ 726,860	$ 929,532

Dividends

The Standard Oil Co. of Nebraska has declared the regular quarterly dividend of 63 cents a share on its capital stock, payable September 20 to stockholders of record August 27.

The Standard Oil Co. of New Jersey has declared the extra dividend of 12½ cents a share and the regular quarterly dividend of 25 cents, the same as in the preceding quarter, both payable September 15 to stockholders of record August 25.

California Petroleum

The California Petroleum Corp. and subsidiary companies report consolidated income account for the six months ending June 30, 1927, as follows:

Net income from operations	$6,602,714.42
Deduct: Depreciation, depletion and other deductions	4,840,179.57
	1,762,534.85
Deduct: Interest and discount on bonds	682,962.87
	1,079,571.98
Deduct: Reserve for Fed. taxes	109.261.52
	970,310.45
Deduct: Minority proportion of earnings	29,195.76
Net profit: Carried to surplus	$ 941,114.69

Note—The company is now carrying 7,448,813 bbls. of crude oil, gasoline and other products in storage, an increase of 1,116,597 bbls. since December 31.

Simms Petroleum Co.

The consolidated statements of earnings for the first six months of 1927 show gross operating revenues were adversely affected in the second quarter by extremely low prices for crude and refined products, gross production revenue amounting to $1.05 per net barrel of production compared with $1.72 per net barrel in the second quarter of 1926. Net profit from operations was $815,721,50. Charges for all intangible costs of productive drilling, depletion, depreciation, etc., were $891.111.06 resulting in a deficit of $75,389.56 for the quarter compared with a deficit of $136,219.33 for the first quarter.

The balance sheet as of June 30, 1927, shows current assets of $4.965,396.70 and current liabilities of $1.006,165.98, or net quick assets of $3,959,230 72. The refined products of the company on hand

(Continued on Page 155)

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. quot. Aug. 22	Clos. quot. Aug. 15	1927 High	1927 Low	1926 High	1926 Low	1925 High	1925 Low
Amerada Corp.	..	30¼	2 ½	37⅝	27⅝	32⅞	24⅝	..	..
Atlantic Refining, com.	100	124	122⅝	128⅝	107	128⅝	97	117½	95½
Barnsdall "A"	25⅛	23⅞	24⅝	35½	22⅝	32½	23½	33½	18⅝
California Petroleum, com.	25	22½	22⅝	32⅝	21½	38⅛	30⅝	34⅝	23⅜
Houston Oil	100	131⅞	126½	173¼	60⅜	75	50¼	85	59
Independent Oil & Gas	..	*21⅝	21¼	32⅜	17⅝	34	20¼	41⅜	13½
Louisiana Oil	10	11½	11⅞	18⅝	11½	19⅝	12	23⅜	13⅜
Maracaibo	..	16	15	22⅝	15	27⅜	18⅜	35½	20⅝
Marland	..	37⅜	35⅝	58½	31	63⅝	49¼	60⅛	32⅝
Mid-Continent Petroleum	..	32¼	31⅝	39⅜	29	41	25⅝	38	25⅝
National Supply	50	85	85	95⅝	76	84⅞	55½	71	54⅝
Oil Well Supply	25	34½	*35	44⅝	31¼	36	30	38	33⅜
Pan American, B	50	54⅛	54⅞	66⅝	54	72⅝	56⅛	83⅞	59½
Pan American, Western B	..	*22	22⅛	37⅞	39	46	34	94⅝	37⅛
Phillips Petroleum	..	45	43⅝	60¼	48¼	54⅞	42½	47½	36¼
Producers & Refiners	50	24⅝	24	33⅜	16⅝	26	11	32⅝	12½
Pure Oil, com.	..	27	26⅝	33½	26	31	25⅝	33⅝	25½
Royal Dutch, N. Y., sh.	13.40	46½	45½	54½	48⅛	57⅜	49⅝	57⅝	48⅛
Shell Transport	10	*43⅛	*42⅛	49	43⅜	48⅝	42	49	39⅝
Shell Union, com.	..	27⅛	28¼	31⅝	25⅝	30⅞	24	28⅜	21⅝
Simms Petroleum	10	16¼	14⅝	22⅜	14½	25⅝	16½	28½	18⅜
Sinclair Consolidated	..	17⅛	16⅝	22⅝	16½	24⅞	16⅝	24⅞	17
Skelly Oil	25	28	26⅜	37⅜	24¼	37⅛	27	32½	21⅜
Standard of California	25	54⅜	55¼	60⅝	50⅜	63½	54	67¼	52½
Standard of New Jersey, com.	25	39	38½	41⅝	35½	46⅜	37½	47½	38⅜
Standard of New York	25	31¼	31⅜	34½	29⅞	47¼	30⅝	48⅝	40
Sun Oil Co.	..	*32	31⅜	34⅞	30	41⅜	30⅛	43⅜	38½
The Texas Company	25	49¼	49¼	58	45	58	48	55	43⅜
Texas Pacific Coal & Oil	10	14½	14¼	18⅞	12	19½	12⅝	23⅜	11
Tide Water Associated Oil	..	17½	17½	23⅛	15½	21	17	..	..
Transcontinental	..	8⅜	8⅜	8⅝	3⅜	5½	2	5⅝	3½
Union Oil of California	25	43⅝	43½	56½	39⅝	53⅜	37¼	43⅝	32½
Union Tank, com.	100	110½	111½	115	95	120⅜	84½	134	118
White Eagle Oil & Refining	..	*23	*22⅜	27½	22	29⅜	25½	21⅜	25⅝
Standard Oils									
Anglo-American Oil	£1	18⅜	19	21⅝	18⅜	19⅜	16½	26⅜	17½
Borne Scrymser	25	63⅜	*61	69	49½	75	65	‡240	205
Buckeye Pipe Line	50	*55	*55⅛	58	46	59½	42	72	63½
Chesebrough Manufacturing Co.	25	*109	*108	107	76⅛	81⅛	63	74	98⅛
Continental	10	18⅛	17	22⅝	16⅜	25⅞	19¼	21½	21⅞
Cumberland Pipe Line	100	*90	*89½	‡137	90¼	137	102	156	128
Eureka Pipe Line	100	*53	*53	56½	47	53⅜	43	96	61¼
Galena Signal, com.	100	*8	7½	13½	7½	32½	9⅞	68½	23⅛
Humble Oil & Refining Co.	25	61⅝	61⅜	62⅜	54	99⅝	52	99	42½
Illinois Pipe Line	100	164	150	164¾	123¾	144	131	154½	124
Imperial Oil	..	49¼	48	47	37⅜	39⅜	32½	39¼	27¼
Indiana Pipe Line	50	*69	68	72½	61	68	52¾	84	87½
International Petroleum Co.	10	31½	30½	34⅞	28½	35¼	28⅜	25⅝	22½
National Transit Co.	12.50	15⅝	*15⅛	17⅛	13⅝	30⅜	27¼	25⅛	16½
New York Transit	100	*34	*33¼	36	31¼	61½	27¼	70	50
Northern Pipe Line	100	85	*81	88	70	80½	64	88	67½
Ohio Oil Co.	25	*69	60½	64¼	52	67¾	55¾	75¼	60
Penn-Mex Fuel	25	24⅜	*24	31	12	24¼	15	44	19
Prairie Oil & Gas	25	53½	51½	56½	45⅝	60¼	48	65½	45⅞
Prairie Pipe Line	100	182¾	179¾	185	132	137½	122½	129¾	105
Solar Refining Co.	100	*182	*181	‡201½	173	212	184½	159	200
South Penn Oil	25	*37	*36¼	36	31½	50	35	‡197	139
Southwest Pa. Pipe Line	100	*71	*70	77	55½	56	47½	84	50
Southern Pipe Line	50	*18	*17	‡27¼	24	27	24	‡103	63
Standard of Indiana	25	72½	*72⅝	74¼	64¼	70½	60½	70⅝	69¼
Standard of Kansas	25	17	16⅝	20⅝	15⅝	36½	16½	46	30¼
Standard of Kentucky	25	122½	121½	123½	111⅝	134⅝	108	137	114⅝
Standard of Nebraska	25	46½	*44	49½	45	51⅛	42	‡270	231
Standard of Ohio, com.	100	84⅝	*77	‡354	294	362	192½	369	328
Swan & Finch, com.	25	15½	*16½	17	15	21	13	27	12
Vacuum Oil	25	129	126⅝	134	95½	109⅜	94⅛	109½	80⅛
Miscellaneous									
Gulf Oil Corp. of Pa.	25	92	91½	96⅛	86¼	95	82½	98¼	63½

*Bid, no sales. ‡Old stock. †New stock.
Quotations furnished by W. J. Wollman & Co.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Aug. 22	61.53	July 18	60.36	June 12	59.91
Aug. 15	61.05	July 11	59.36	June 6	59.27
Aug. 8	61.33	July 2	58.99	May 28	58.68
Aug. 1	60.38	June 27	58.99	May 23	57.89
July 25	60.55	June 20	60.46	May 16	58.10

Late Fields

(Continued from Page 47)

The Humble Oil & Refining Co.'s No. 1 Elliott & Clark, the discovery well in the Carey Lake section of Cherokee County, is pumping about 100 bbls. of oil per day and a large amount of salt water. A derrick is up for No. 2 Elliott & Clark, located 150 feet west of the discovery well. The Humble Co.'s No. 2 Earl & Ragsdale, is drilling in sandy lime at 4,515 feet.

Over in Anderson County, which joins Cherokee County on the west, the Humble Oil & Refining Co. abandoned No. 2-A Southern Pines at 5,012 feet. No. 2-B Southern Pines is drilling in sandy shale at 4,835 feet. The Humble Co. is rigging No. 1 Russell, near Nedhes.

Jones and others' No. 1 Little, 4 miles west of Corsicana, Navarro County, was abandoned at 2,400 feet. The Wild Rose Oil Co.'s No. 2 Little has been shut down at 1,800 feet for 30 days.

C. M. Joiner has spudded in No. 1, located 6 miles south of Overton, Rusk County.

S. F. Freeland and others' No. 1, located west of Coffeyville, Upshur County, is in a gas sand at 2,010 feet.,

OKLAHOMA

The Greater Seminole area produced 436,201 bbls. on Tuesday morning of this week, divided as follows:

	Bbls.
Bowlegs	168,351
Little River	8,151
Earlsboro	154,063
Seminole	76,253
Searight	29,383
Total (from 702 wells)	436,201

There is a slight advance in the number of operations in Greater Seminole, showing 559 wells and locations, against 550 one week ago. The report is as of August 20.

	Little River	Seminole	Earlsboro	Searight	Bowlegs	Total
Locations	6	1	10	5	7	29
Rigs	30	5	27	4	26	92
Drilling less than 2,000 feet	49	1	34	3	14	93
Less than 3,039 feet	4	7	45	3	21	80
Less than 3,700 feet	10	8	40	10	21	89
Below 3,700 feet	4	28	68	11	65	176
Totals	95	50	224	36	154	559

In the Earlsboro Pool, the Independent Oil & Gas Co. and Margay Oil Co.'s No. 2 O'Dell, NE cor. SW SE Section 4-9-5, which was completed some time ago and the casing damaged by a shot, has been cleaned out and is now flowing 4,800 bbls. daily.

In this same pool the Magnolia Petroleum Co.'s No. 1 Sparks, NW cor. SW Section 11-9-5, made 1,251 bbls. the first 18 hours from sand 4,285-91 feet.

In the old Allen Field of Pontotoc County, W. R. Ramsey's No. 1 Webb, NE cor. SW Section 20-5-8, has 25,000,000 feet of gas and is making 150 bbls. from sand 2,446-73 feet. No. 1 Milner, SE cor. NW SW Section 17-5-8, blew in with 50,000 000 feet of gas at 2,331 feet.

In the Bristow district of Creek County, H. C. Wilson's No. 1 Durant, NW cor. NE Section 10-15-8, is making 48,000,000 feet of gas in the Dutcher sand 3,218-23 feet.

A new Wilcox sand development is the Shaffer Oil Co.'s No. 1 Cook, SE cor. SW Section 31-17-5, which was completed in the upper sand one year ago and has just reached the Wilcox and is making 1,420 bbls. per day, which is cut 12½ per cent. The sand record is 4,210-40 feet, and it is believed that the water may be coming from above.

In Osage County, the Peters Petroleum Co.'s No. 2, NW cor. SW Section 26-25-9, is flowing 10 bbls. an hour from the Bartlesville sand 2,115-27 feet.

HALT DECLINE IN GASOLINE PRICES

(Continued from Page 36)

throughout the week but competition from North Louisiana and North Texas refiners threatened to drive the price direct to the trade to 6 cents at times. This was true only in the case of shipments to distant points such as Ohio and Illinois where the freight advantage of the Group 3 refiners is not so great. The crude runs at some of these plants were reported decreased from the schedule adopted earlier in the month and the situation improved.

High gravity gasolines were not in great demand and yielded to fractional price declines. The lack of an export market on these grades has made them follow the price trend on U. S. motor gasoline. This is true, especially since refiners have installed equipment to allow them to convert a greater proportion of their normal gasoline yield into the higher gravity grades. There was some buying of 390 endpoint gasoline in the Shreveport and North Texas areas which helped to increase the movement of the grade there but the prices generally quoted were not attractive to refiners of other districts and the movement had no effect on the Group 3 prices and did not stimulate buying in Oklahoma.

Naphtha prices were reduced slightly and were generally quoted at 6¼ cents. This decrease came as a result of the slow buying by blenders who cannot profitably blend the refinery naphtha and natural gasoline at the prevailing prices. The quantity of the naphtha offered has been materially decreased as refiners added fractionating equipment to include more of the heavy ends in gasoline and as they used more of their own production in the tail gas recovery systems.

Kerosenes and Distillates

There was no price change in kerosene and the talk of export buying last week failed to carry on through this week. Quality is being recognized more now than ever before and refiners report sales prices over a wide range. In some cases 41-42 kerosene was sold at 4½ cents while 4 cents was a general price. Low flash material passing a good burning test and having a good color and odor is in demand and where extra quality is given the price included a premium.

Distillate buyers are still holding out for lower prices and there is but little material being moved. Some refiners are making exceptionally good quality material and are holding out for prices one-quarter to one-half cent above the regular 38-40 distillate price of 3⅛ to 3¼ cents. Other refiners are offering a good quality of gas oil having a light color, relatively low flash and fair odor at prices slightly higher than gas oil. Price range on this material is 2⅝ to 2¾ cents. The buying of furnace oil will begin shortly and refiners have prepared a more definite program of manufacture than in other years. More attention will be centered on this oil as buying picks up in supplying the early demand in the North.

Natural Gasolines

There was enough export business to maintain prices at last week's level but the market could not be considered active. One sale of 75 cars and another of 25 cars of Grade A for export came at times when lower prices seemed probable and as these were closed, local refiners were attracted to the grades B and BB because of their lower price and the inquiries were responsible for the increased activity in these.

Fuel Oils and Gas Oils

Although fuel oils showed no falling off in price, the desire to decrease inventories at refineries at the early part of the week threatened lower prices. As yet, there is only a fair movement of fuel but the price is usually considered on the bottom for reasons already given. Higher gravity fuels reflected the weak position of the lower gravities and were followed by gas oil. At present prices most refiners find but little profit in their cracking operations and are maintaining them principally because of wanting to hold their organization with as little change in the operations as possible, feeling that conditions will improve in a short time.

Lubricants and Wax

With no change in prices, lubricants continued to move at a very satisfactory rate. Competition from south Texas refiners on car lot shipments had to be recognized, but much of the lubricating oil production in Group 3 is being compounded and shipped in barrels. These same Group 3 refiners are buying south Texas lubricants for compounding and are playing a major part in supplying an outlet for the production of some south Texas refiners, and in turn, partially benefit by lower prices in south Texas.

Wax was traded a little more freely and as the greater consuming season is starting, most manufacturers expect an upturn in prices. Heavy stocks have been accumulating over the past two years and a break in prices was evident. At the present low prices, there has been every incentive to increase the use of wax and domestic consumption has been increased to the point where production and consumption are more nearly equal than any period over the past two years. The wax prices were unchanged, with sales being reported at 2½ cents and 2⅝ cents.

CALIFORNIA MARKET SLIGHTLY IMPROVED

LOS ANGELES, Calif., Aug. 20.—Summer demand for gasoline is now at its height. Domestic consumption accordingly is very heavy. The tone of the market appears slightly improved, prices remaining the same. Independent refiners marketing a cheaper grade of gasoline are in most cases offering their product at 18½ cents per gallon, including tax, which is only 2 cents under the service station price of the larger companies.

California oil executives are feeling more optimistic as to future market developments as is evidenced by the fact that companies who a few months ago stopped all work on construction of new cracking units have again started such construction. Those who have not already recommenced construction are known to be contemplating such action.

The persistence with which the spread between the price of gasoline and the price of crude has remained as large as it is at the present time, has led some of the smaller refiners, who have their plants shut down at present, to figure on starting up again. These refiners are in most cases small, having a throughput of from 1,000 to 3,000 bbls. per day. There has been quite a little evidence of late pointing to the starting up of some of these plants in the near future, but the very weak fuel oil market has prevented most of them from actually getting under way. Without a better outlet for fuel oil in sight, it is doubtful if very many of these refiners are actually starting up again in spite of the fact that such a move is rather generally being contemplated.

Exports to the Atlantic Seaboard and Atlantic foreign trade fell off slightly during the past week. This trade has been quiet for some time now, but there are some close to the industry who look for improvement before long.

The fuel oil market continues weak. It is understood that one of the larger California companies is taking advantage of the present low prices of fuel oil by buying and storing with a view of using such oil for cracking stock when the market warrants such a move.

COLORADO GAS CONSERVATION BODY CONSIDERS RULES AND REGULATIONS

By Tolbert R. Ingram

DENVER, Colo., Aug. 20.—The Colorado Gas Conservation commission recently appointed by Governor Adams following the enactment of the law creating it, held a meeting during the week to consider tentative rules and regulations which it proposed to lay before the operators of the district before adopting them and putting them into operation. The commission is composed of S. H. Keoughan, president of the Continental Oil Co., president; C. H. Sherman, manager of the Rocky Mountain district for the Union Oil Co. of California, vice president, and F. W. Freeman, of The Texas Company. James Duce, state oil inspector, is an ex-officio member of the commission.

Mr. Sherman had compiled a set of rules and regulations embodying the principal suggestions of the members. It was decided, however, that a meeting of the operators will not be held until after the meeting of the gas conservation committee of the American Petroleum Institute at Colorado Springs September 12. The purpose of this was to give the commission an opportunity to submit the proposed rules and regulations to the committee of which E. W. Marland is chairman, and to hear any suggestions the committee might offer.

It had been generally understood that the law provided for a permit system which would require the taking out of a permit before a well could be commenced, plugged or abandoned and the payment of a fee of $25 therefor. It has been learned, however, that before the law was finally adopted, that feature had been eliminated in the house of representatives. The fees were intended to supply funds with which to operate the law. In some quarters it is believed that the failure to make an appropriation and the elimination of the section directly authorizing the permit system might handicap the commission in putting the law into effect. This opinion is not shared, however, by members of the commission. The law is unusually broad, giving the commission almost unlimited powers in making such rules and regulations as it desires and, if it so chooses, it may provide for the permit feature. It is felt by members of the commission that since the law is intended for the benefit of the industry that no members of the industry would decline to pay a reasonable fee to be used to defray expenses, since there is no intention to make the service yield a profit for the State.

OIL SECURITIES ARE INACTIVE DURING WEEK

(Continued from Page 154)

have been marked down to market, and book value of crude oil inventory has been reduced to within about $60,000 of the market value. Crude oil and refined products on hand increased from approximately 1,100,000 bbls. at the first of the year to approximately 1,650,000 bbls. on June 30.

Due to the development of new production in west Texas, net production has shown a substantial increase in the last few months. Net production in the second quarter of 1927, which averaged 11,993 bbls. daily, was an increase of about 2,000 bbls. daily over the first quarter. For the month of July net production exceeded 15,000 bbls. daily, which, with the exception of January, 1925, is the largest production for any month in the company's history.

GUSHER REPORTED AT GROZNY

The Soviet press reports a new gusher in the Grozny oil fields. It is reported from Moscow that Groznefi is carrying out survey and experimental drilling in the region of the Black Mountains. Intensive survey operations are also reported around Grozny itself.

FRENCH GASOLINE STORAGE

The last meeting of the Societe des Ingenieurs Civils de France discussed as a safeguard in the use of gasoline the separation of the lighter elements in gasoline from the heavier ones and the use of separate storage tanks on cars and planes, the tanks holding the highly inflammable products to be so arranged as to be easily disposed of in case of fire or danger.

OKLAHOMA-TEXAS LEADING PRODUCERS

(Continued from Page 40)

which is yet his legal residence, he must get some kick out of the thought that he brought as much oil to the surface in Oklahoma as more than 43,000 wells back in the old home state produced in the same period. It is often said that the producing end of the oil business is getting to be too big for the individual, but there are a few men like Tom Slick and Lew Wentz who appear to be able to hold up their end with the big oil companies owned by many thousand stockholders.

Seminole Develops New Leaders

Two companies which until last year could not be rated among the top notch producers in Oklahoma are the Amerada Petroleum Corp. and the Indian Territory Illuminating Oil Co. The former company produced 4,893,991 bbls. net and the latter 3,432,703 bbls. net in the first half of the year. The Amerada Petroleum Corp. came into Oklahoma a few years ago without blare of trumpets and started operations. It has been a well administered and very successful company from the beginning and is now among the leaders in the state. The Indian Territory Illuminating Oil Co. can trace its pedigree back to the beginning of operations in Oklahoma as it is an outgrowth of the famous Foster blanket lease which covered the whole Osage Nation until the United States Department of the Interior broke it up as soon as Foster proved that Osage County produced oil. H. V. Foster, president of the I. T. I., is a son of the original owner of all the acreage in Osage County. The company was an oil and gas producer in Osage County for many years before it reached out into other regions. It opened the Seminole Field an dhas been one of the leading operators and royalty owners in that region ever since.

Seminole contributed largely to the big increase in production of the Gypsy Oil Co., Magnolia Petroleum Co., Prairie Oil & Gas Co., Pure Oil Co., Empire Gas & Fuel Co., Independent Oil & Gas Co., Tidal Osage Oil Co. and Mid-Continent Petroleum Corp., all of them among the leading producers for the first half of the year. There was a time when the Comar Oil Co. headed all Oklahoma producing companies but its production is confined to the high-grade oil fields in Kay and Noble Counties and it has dropped back to tenth place since Seminole became the country's leading field.

Average Price Per Barrel

The reports to the State Auditor on production and market value indicate that the average price of oil in Oklahoma in the second quarter of 1927 is considerably below what it was thought to be. The combined net production of the Amerada, Carter, Magnolia, Texas, Wolverine, Roxana, Comar, Marland, Prairie, Gypsy and Sinclair Oil Companies, whose properties cover practically all the important producing districts in the state brought an average of $1.29 per barrel. In the first quarter of the year the same companies' combined output brought an average market price of $1.81 per barrel, according to the reports to the State Auditor for that period. This shows an average decline of 52 cents per barrel in the second quarter. The price of 36-36.9 gravity crude throughout the second quarter was $1.28. The same grade of oil opened the year at $1.90 per barrel and after two cuts closed the first quarter at $1.28 per barrel.

Texas' Biggest Producers

The report contained elsewhere in this edition, showing the gross production of oil companies, firms and individuals in Texas and the value of the crude, differs from the report on Oklahoma, in that Texas report shows gross production and that for Oklahoma net production.

By far the largest producer in Texas in the first half of the year was the Gulf Production Co., which shows a gross of 11,529,358 bbls. A local company in the Gulf Coast Field, the Yount Lee Oil Co. of Houston, Tex., discoverer of the Spindletop deep sand area, is second with 7,581,124 bbls., most of which was taken from the Spindletop Field.

There are more operating companies with a production of 1,000 bbls. a day or more in Texas than in Oklahoma, and in the list of leading producers are a dozen individuals and firms, while in Oklahoma only two, Messrs. Slick and Wentz, are listed with the leaders.

The Texas fields have in the past year attracted many individual operators and small companies because the drilling, compared with Oklahoma, is shallow and inexpensive. Oklahoma's shallow territory has been pretty thoroughly gone over, and its future lies mainly in what may be found in the deep horizons, from 4,000 feet to over a mile in depth, while West and parts of Central and Southwest Texas hold out much promise of oil from very shallow depths down to the 3,000-foot horizon. Men and companies of limited capital are enabled to get results, good or bad, in many parts of Texas at far less cost than in Oklahoma, and just now it is the most attractive part of the United States for the oil operator of moderate means.

Average Price of Texas Crude

The gross production report gives a very good line on the average drop in the price of oil in the second quarter as compared with the first. The combined gross production of a dozen of the leading companies, representative of every district in the State, shows an average market price of $1.46 per barrel in the first quarter and $1.14 per barrel in the second. There was no change in price in the second quarter.

Texas produces many varieties of crude oil. Crude of high gravity and high quality is produced in North and Central Texas. The Gulf Coast produces a crude peculiar to itself, especially adaptable to the manufacture of lubricants. It is viscuous, free from wax and flows at unusually low temperatures, making it very desirable for general lubricating purposes. The Panhandle and West Texas crudes and those in the Southwest contain sulphur to an extent that lessens the desirability of the crude and reduces its value on the market. The difference in the average price of Oklahoma crude and Texas crudes lies in the fact that the Oklahoma production is more uniform in quality and of higher gravity as an average.

TRANSPORTATION IN THE OIL INDUSTRY

(Continued from Page 38)

operate with high gravity and in addition they have manufacturing facilities to secure the maximum amount of gasoline from a barrel of crude. Along the East Coast refiners use large quantities of low gravity crude oil but this situation so far as gasoline recovery is concerned, is partially offset by the fact that they have a relatively large cracking capacity.

This difference in crude oil and manufacturing facilities is vital to any organization considering the expansion of its refinery and marketing facilities. Ordinarily, a refiner going into a new section with a plant will be compelled to use the same grade crude as the refiners already established and this in turn will have an important bearing on his method of operation.

It will be noted that the estimated crude runs to stills (column B) which totals 2,270,700 bbls. is not the same as the total estimated requirements (column C). It should be remembered in this connection that the estimated requirements are for domestic gasoline consumption only and do not take into consideration the crude required for export movement. This export movement of gasoline so far this year has averaged about 125,000 bbls. daily.

In this article it is only possible to call attention briefly to a few of the transportation conditions now existing in the oil industry. From the data given in the table a detailed study of the situation in all the states could be made and for any given area. These tables take into consideration only gasoline consumption. Cases can be cited where an oil company is more concerned in fuel oil transportation or some other product of his refinery operation, gasoline being in the nature of a by-product. These cases however, are exceptions to a rule in which the industry as a whole is mainly concerned in the transportation of crude oil and its principal product—gasoline.

The three principal means of transporting crude oil and its refined products are tanker, pipe line and tank car. In general the relative costs per unit transported follow the order just given, water transportation in tankers being the lowest and rail transportation in tank car the highest. In the case of gasoline, tank wagon transportation is a factor. Tank wagon transportation is the cheapest and in many cases the only feasible method of transporting gasoline for short distances in the retail markets. However, on long distance hauls tank wagon movement becomes the most expensive method of transportation.

Crude Oil Situation

Considering first the crude oil situation, it will be seen that 81 per cent of the crude oil production is found in the states of Oklahoma, Texas and California. These three states have produced the bulk of crude oil for several years and there are no indications at this time that their supremacy will be seriously challenged by any other state.

In Oklahoma and Texas the bulk of this production is located at inland points which means that the crude oil requirements in excess of local refinery requirements must be transported to distant points either by rail or pipe line. The three states are large refiners but at that only take care of 41 per cent of the total crude refined. Turning to the gasoline consumption of these three states it is found that the total gasoline consumption of the three amounts to only 15 per cent of the total for the entire United States.

Typical Condition

Thus we have a situation in which 81 per cent of the raw material is located in three states which have 41 per cent of the manufacturing capacity and only 15 per cent of the consumption. This obviously means that the excess crude oil over crude oil requirements must be transported to other points and the excess gasoline from the refineries over local requirements must be transported to distant consuming markets.

This particular case gives a good insight into the transportation problem of the oil industry. Other conditions could be cited as typical. For instance taking the Mississippi River as the dividing line and we find that east of the river 4.5 per cent of the crude oil is found. In the same area 27 per cent of crude oil is run to the still of refineries while 65 per cent of the gasoline is actually consumed in that area.

Thus the bulk of the crude oil is produced and refined west of the Mississippi River and consumed east of the river. The location of the crude oil and the consuming areas obviously are two factors in this situation over which the oil industry has no control. Oil producers have to get their oil where it is known to be available while the marketing end of the oil business has to deliver the gasoline where it is wanted by the consuming public.

Marketing Area

The only flexible feature is the location of refineries and this problem is complicated by the fact the transportation of the crude oil from the field to the refinery must be considered as well as the movement of the finished products from the refinery to the consuming markets. In order to facilitate the study of this problem Table 1 showing the divisions by marketing districts was prepared.

The boundaries of a state cannot be taken as the limiting factor in an efficient transportation system. Many states have neither crude oil production or refineries. In several of these cases the location of refineries would not tend to reduce transportation costs for the reason that they can just as economically be served from adjoining states. This is particularly true of states located along the coasts.

On the West Coast for instance practically all the refining capacity is located in California. With water transportation for the finished products from the refineries there would be no transportation advantage in locating refineries in Oregon and Washington. Largely the same situation exists on the East Coast.

Table 1, in connection with the marketing areas gives the name of the principal Standard marketing organizations. This division followed the dissolution of the Standard companies in 1911 when the entire country was split up among the several Standard marketing companies.

These divisions are still recognized by the trade. As a matter of fact, however, they are fast losing their former significance. Other companies in two or three instances at least market more gasoline in their areas than do the Standard companies. In addition there is a marked tendency on the part of the Standard companies to forget their former policy of not infringing on each others marketing areas.

Transportation is playing an important part in this gradually overlapping of marketing areas. Some of the Standard companies have acquired subsidiary interests which have crude oil producing, refinery and marketing properties which are not advantageously located in regard to the operation of the parent company. In these cases the companies are finding it expedient to find market outlets in areas where they have the advantages of low transportation costs.

The expansion of the Standard Oil Co. of Indiana through the Pan-American Petroleum and Transport Co. is a notable example of this situation. The Pan-American at the time it became allied with the Standard of Indiana which now owns a controlling stock interest had a coastal refinery in Louisiana and was fast expanding its marketing facilities in that area and along the East Coast. Since that time it has gradually expanded its facilities so that it is now marketing in the areas which formerly were considered the exclusive market outlets of the Standard of Kentucky, Standard of Ohio, Standard of New Jersey, and Atlantic Refining Co.

Other major companies are finding it necessary to enlarge their market outlets at points justified by the location of crude supplies at refineries. At the same time other companies are changing operations so as to have their refineries at points where they can serve their established market outlets at minimum transportation costs.

Middle West

Referring again to Table 1, attention is called to the situation prevailing in the Middle Western states. The table shows that the 10 states which comprise that area produce only 5 per cent of the country's crude oil production. The refiners located in that area consume 12.3 per cent of the crude oil refined. This situation in regard to crude oil production and refining contrasts with the gasoline figures which show that these 10 states consume 29.5 per cent of the country's total. Column C shows that these 10 states should have 19.5 per cent of the country's refinery capacity to supply this gasoline consumption. This would mean additional crude runs to stills of 150,000 bbls. daily.

The Nebraska and Ohio areas could be added to the Middle West to further emphasize this relative situation. This condition is responsible for the fact that several companies are expanding their markets in those states. Ohio in particular has been a battle ground for the large companies during the past year, all attempting to establish themselves in an area where crude oil production and refining capacity is not sufficient to dominate the retail markets.

The Mid-Continent, Gulf Coast and East Coast refiners, all of which have surplus gasoline are making up this deficit in gasoline supplies for the areas just mentioned. This is being done in some cases at high transportation costs. It is worthy of note in this connection that one major company, the Roxana Petroleum Corp. has bettered its competitive situation from a transportation viewpoint by locating a refinery at East Chicago, Ind., its plant having the advantage of pipe line transportation for crude and water for refined products as well as short tank car hauls. Many believe that this transportation condition will ultimately mean that the Middle West and adjoining states will have sufficient refining states to supply their gasoline requirements.

Coastal Refining

The capacity of the coastal refineries especially in the Gulf Coast area have ex-

The Waters Gauge Cock

60 SEATS

The non-corrosive monel metal nozzle is always clean—self sealing when handle is released—it can't leak or spit.

Stocked by All Supply Stores

SMITH SEPARATOR COMPANY

Tulsa Okla.

NEW YORK OFFICE—Export Representative:
Oil Field Equipment Co., 30 Church St., New York
Cable Address: "Oilfield" N. Y.

CALIFORNIA OFFICE:
2039 East 38th Street, Los Angeles, California

LONDON OFFICE:
Perkins MacIntosh Petroleum Tool & Boring Co., Ltd., 25 Bishopsgate
Cable Address: "Oleborers" London

TEXAS OFFICES:
924 Post-Dispatch Bldg., Houston, Texas
1402 Fort Worth Nat'l Bank Bldg., Fort Worth, Texas

LOUISIANA OFFICE:
405 Forest Ave., Shreveport, La.

KENNEDY

VALVES-PIPE FITTINGS-FIRE HYDRANTS

50th Anniversary 1877-1927

KENNEDY Malleable Iron Fittings may cost a fraction of a cent more than the cheapest fittings you can buy, but they save many dollars of pipe-fitting time by protecting you against imperfect threads, leaky connections, and split fittings.

Send for Catalog

THE KENNEDY VALVE MFG. CO. ELMIRA, N.Y.

New York Boston Chicago San Francisco Philadelphia
Cleveland Atlanta El Paso Los Angeles Seattle

panded rapidly during the past five years. This expansion can be explained as almost entirely due to transportation advantages. Plants located on the coast have cheap water transportation to many of the main consuming points. In many instances it has been possible to move gasoline several hundred miles by water and rail and still have transportation advantage over the inland refiner moving his products relatively short distances.

The same situation applies to the movement of crude oil. The coastal refiners are in a position to secure the maximum movement by water in securing both domestic and foreign crude supplies.

LOUISIANA GAS TO SERVE FIVE STATES

(Continued from Page 42)

ity of that field at approximately 3,500,000,000 feet and the life of the field at the present rate of consumption at more than a score of years.

However, the past year, the average volume of gas actually produced daily in that field amounted to 370,705,000 feet, of which at the time the survey was made only 126,599,000 feet was being consumed for domestic and industrial purposes. The remainder was burned in the manufacture of carbon black, of which the field is the largest producer in the world.

Until recently the Monroe gas has been virtually isolated within the borders of the district. There has been a 32-mile line, now owned by the Northwest Louisiana Gas Co., from the field to Ruston, serving this city, and last year a trunk line was built to Baton Rouge. The former is a 6⅝-4¾-inch line while the latter is a 22-inch pipe extending 170 miles.

The Baton Rouge line has a capacity of 70,000,000 feet of gas daily with its present one booster station. Until this month it has served principally the Standard Oil Co. of Louisiana's refinery but the New Orleans extension has been completed to Reserve, La., within 30 miles of the ultimate diestination, where a large sugar refinery is now taking Monroe gas for fuel. In the near future this line will be completed as far as Destrahan where connections will be made with the Mexican Petroleum Corp. refinery.

When the line is completed to New Orleans and gas is used for domestic as well as industrial purposes, there will be a marked increase in the drain on Monroe's reserves, which naturally will shorten the expected life of the field.

Arkansas Trunk Lines

Two additional trunk lines are to place Monroe's resources at the disposal of Arkansas consumers within the next few months. One of these is the Crusader line leased by the Natural Gas & Fuel Corp. of El Dorado, and the other will be the line to be built by the Natural Gas Producing Co. and the Excelsior Pipe Line Co. from a point near Haile, Union Parish, to Camden, Ark.

The latter interests already have a contract to supply a large pulp and paper mill at Camden. An 18-inch line will be laid. The Natural Gas & Fuel Corp. has an extensive domestic, industrial and field distribution business at El Dorado and other towns and in fields of that vicinity. The rapidly declining volume and pressure of Arkansas gas is given as the reason for the increased need of tying up with North Louisiana's reserves.

To date there are no lines connecting the Monroe area with fields and lines of Northwestern Louisiana. A link to be built by the Northwest Louisiana Gas Co. between Ruston and Arcadia will be the first to join the fields of eastern and western Louisiana. The latter company, together with its subsidiary, the Peoples Gas & Utilities Co., is building up an extensive transportation and distribution system in Northern Louisiana, and is among other interests in attempting to provide extensive gas reserves in as many fields as possible to meet the growing demand for natural gas.

The Rayville district of Richland Parish, the Carterville Field of northern Bossier Parish and the Waskom, Bethany and Greenwood sections of western Caddo Parish and extending into East Texas are being counted on to supply a large volume of gas to be required by the new lines. In all three of these districts an extensive development program is under way as a result of the keen competition for gas rights and production the past few months.

New Outlets

These fields are in addition to older gas-producing areas which already are serving a network of lines to a large extent. The Magnolia Gas Co. only this month completed a 12-inch line into Carterville, furnishing that field with its first outlet. This line extends 12 miles to a connection with the company's main trunk from the Sarepta Field to Waskom and thence to Dallas and Beaumont.

The Dixie Pipe Line Co., which is to build a line from Waskom to Houston and Port Arthur, also is expected to make connections with that field through the Reserve Natural Gas Co., in which it owns a half interest. The Dixie Gas & Utilities Co., of which the Dixie Pipe Line Co. is a subsidiary, has been among those companies active in bidding for Carterville gas. The Reserve could bring into Carterville with a comparatively short branch to its system, which already connects neighboring fields. The Reserve's western terminus is at Waskom, where it will have connections with the Dixie's proposed line.

The Dixie Pipe Line Co.'s Waskom-Houston and Port Arthur project was launched several months ago by the Moody-Seagraves interests of Galveston and Houston. The right of way purchasing virtually is completed and preliminary arrangements for the actual laying of the line have been made. A tract of 30 acres has been purchased at Waskom, on which work will be started by the first of September on the first of two $500,000 booster stations. The Waskom station will consist of 30 low compression units. A similar station will be built at Livingston, Texas, 80 miles this side of Houston, where the line will branch to Houston and Port Arthur. The line will consist of 22 and 18-inch pipe.

This line is to have a capacity of more than 100,000,000 feet of gas daily and will supply large refineries at Port Arthur and all principal cities along the right of way as well as provide a reserve for Houston. Franchises already have been obtained to distribute gas in most of the cities along the line.

Reserve in Waskom

The Dixie Gas & Utilities Co., through its producing subsidiaries, already has built up an extensive gas reserve in the Waskom district in competition with the Magnolia Gas Co., and also has acquired considerable acreage in the Carterville area. The latest move of the Moody-Seagraves interests, however, has been in the Rayville district of Richland Parish where they have acquired a block of acreage and are drilling two wells.

The latter district, which is comparatively new, has been recognized as an important future source of gas. With the exception of the National Gas & Fuel Corp.'s leased Crusader oil line there are no gas ou lets there, the gas brought in either being used for other drilling tests or shut in. The Natural Gas & Fuel Corp., however, also has been acquiring acreage there and has two tests under way. Development of the field has been retarded this year because of floods.

East and West Artery

The fact that Richland Parish is in the extreme eastern part of the state while the center of operations for the Moody-Seagraves activities is in northwestern Louisiana has led to some conjectures that a main east and west gas artery across the state is under consideration, connecting Richland Parish and the Monroe Field with western Louisiana gas and the eastern Texas project. However, Shreveport representatives of Moody-Seagraves interests, intimate that the Richland operations are for "an entirely different project."

Gas possibilities for the Pine Island Field of Caddo Parish also are prolific. This production already is tapped by the Arkansas Natural Gas Co.'s main line north into Arkansas. Magnolia Gas Co., in addition, is building a 12-inch line from the field to connect at Dixie, La., with its main lines into Texas. Other intrastate systems also have contact there.

With it more than possible that requirements of all these lines to meet the growing consumption of gas in such a large territory to be served by North Louisiana may result in a heavy and rapid depletion of this district's known gas supply, particular interest is being attached not only to wildcat tests showing oil but also to those encountering gas. This product, formerly wasted as of little value, is coming more and more into its own in North Louisiana and time may be in the very near future when gas will be this district's most valuable resource.

SHREVEPORT MARKET DROPS QUARTER CENT

SHREVEPORT, La., Aug. 22.—Refinery gasoline and kerosene dropped another quarter cent on the Arkansas-North Louisiana market the past week with motor fuel quoted readily to local and differential territory at 6½ cents Monday and 41-43 water kerosene at 4 to 4¼ cents. Neither product showed any better tone other than the fact that the movement of gasoline to northern markets in competition with Group 3 slowed up materially. Motor fuel has been moving out of this district to northern markets for several weeks as low as 6½ cents but the local market has held at 6¾ cents until the past week when it broke with material being sold openly to all comers at 6½ cents.

Kerosene generally was 4 to 4¼ cents but was weak at this figure and scattered cars were reported sold at additional concessions. Fuel oil, which has been fairly firm and steady in price, also was faced the past week with reports of cheap material being offered out of this district, one quotation as low as $1.10. The prevailing quotation is $1.15 with material available at $1.12½. Gas oil is the only refinery product which really reflects no change. Natural gasolines continued firm. Grade C was quoted at 6 cents f. o. b. Monroe, La., but refiners were buying this product at 5¼ cents for Group 3.

GROSVENOR EXTENSION HAS 19 PRODUCERS

(Continued from Page 47)

Forest Oil Co. brought in No. 3 Smith for 30 bbls. It was not until June that the good producers commenced coming in as a result of gradually extending operations farther east of the first producer, No. 2 Smith.

Dry holes mean little in this country, and it may be that production will extend up to within a location of the first test on the Smith lease. It is recalled how the south part of the Fry Pool was once condemned because of a dry hole on the Wentz Shore lease, but later development brought good production right up next to it.

On the south of this pool and nearest to the Fry Pool, Selby Oil Co.'s No. 6 Ellis was good for only 15 bbls. after a 9-quart shot, so it is believed that the pool is cut off in that direction. On the northeast is a 25-bbl. well, Rosenfield's No. 1 Davis, but in July the Forest Oil Co. brought in a 300-bbl. producer on its Moore tract, just south of the Davis lease.

In nearly all respects this production is identical with the Fry Pool except that the gravity seems to run a little higher. Crude on the Forest Oil Co.'s Smith lease tested 43 degrees gravity, which is a degree or two higher than the Fry Pool. The depth is almost identical, around 1,300 feet, and the wells are drilled with spudders and machines in a couple of weeks' time at an average cost of $8,000 to $10,000 completed.

The accompanying table of production in the Fry district shows the quality of this pool and what may be expected of the new Grosvenor extension. The Texas Company's Lowe lease holds the record for total output, with nearly 800,000 bbls. produced from October, 1926, to August 1, this year. J. K. Hughes Developing Co.'s Shore lease is second, with 460,000 bbls., and the Sinclair Oil & Gas Co.'s J. H. Fry lease is third, with 433,000 bbls. The discovery lease, owned by Lester and others holds fourth place, with a total of 310 000 bbls., and in July produced 19,778 bbls.

PRODUCTION FRY POOL, BROWN COUNTY

Co. and Lease—	Date Prod. Began	Wells	July Prod. Bbls.	Tl.Prod. to Aug. 1
Amerada Pet. Corp., J. H. Fry	9-26	24	11,935	288,772
M. E. Fry	9-26	2	.....	1,786
Barbara Oil Co., A. E. Metts	2-27	8	4,929	68,142
C. C. Willis	1-27	4	1,085	24,684
Bowers, Chap Eads	9-26	4	558	20,051
Bailey, Peterson & McCarty (was Tower & McKanna) J. W. Shore	4-27	21	45,322	218,950
Charter Oil Co., Andrews	1-27	2	930	11,561
Forest Oil Co., M. L. Smith	5-27	5	8,742	9,642
P. Davis	4-27	1	155	941
Moore	7-27	1	1,085	1,085
Gibson Oil Corp., J. W. Shore	12-26	12	14,229	31,707
W. G. White	9-26	10	806	25,550
J. K. Hughes Dev. Co., J. W. Shore	3-27	29	38,471	460,812
J. C. White	12-26	1	62	493
Humble O. & R. Co., J. H. Fry	10-26	4	248	9,236
M. E. Fry	8-26	5	186	19,984
A. E. Metts	2-27	2	124	2,578
Byler	7-27	1	682	682
Lester et al, M. E. Fry	7-26	18	19,778	310,051
Magnolia Pet. Co., M. E. Fry	10-26	7	527	15,442
C. O. Moore, R. L. Brinson	11-26	2	434	7,562
Quinn et al, Pugh	3-27	2	93	1,144
Rex-Tex & Py-Tex, J. H. Fry	12-26	15	11,191	189,447
Root & Rhodes, W. N. Pugh	5-27	3	403	1,161
Roxana Pet. Corp., J. E. Whiteside	1-27	1	465	6,633
Selby O. & G. Co Ellis	5-27	4	6,8 0	10,588
O. H. Shoup, Jr., Jno. Byler	4-27	6	3,131	20,631
Sinclair O. & G. Co., J. H. Fry	1-27	24	47,430	433,505
J. W. Shore	9-26	8	10,881	50,131
The Texas Co., M. E. Lowe	10-26	76	50,747	789,866
W. N. Pugh	11-26	11	3,5f5	80,004
H. Byler	4-27	4	2,232	8,238
J. Byler	4-27	2	3,906	6,815
Wentz Oil Corp., J. W. Shore	10-26	21	28,892	152,517
Totals		340	320,044	3,280,291

TABLE OF WELLS IN GROSVENOR EXTENSION OF FRY POOL AREA BROWN COUNTY, TEXAS

Company, Well, Farm—	Date	Sand	T. D.	I. P.
Forest Oil Co., 1 Smith	10-14-26	1,346-46½	1,588	Dry
No. 2 Smith	4-15-27	1,325-34	1,334	25
No. 3 Smith	5-10-27	1,326-34	1,334	30
No. 4 Smith	7- 1-27	1,326-37	1,337	250
No. 5 Smith	7-22-27	1,335-47	1,347	960
No. 6 Smith	8-11-27	1,324-46	1,346	160
No. 7 Smith	8-12-27	1,324-42	1,344	1,495
No. 1 Moore	7-25-27	1,253-61	1,261	300
No. 1 Davis	3-10-27	1,276-80	1,280	20
Selby Oil Co., No. 1 Ellis	5-19-27	1,319-26	1,326	40
No. 2 Ellis	6-10-27	1,317-27	1,327 (20 bbls.	283 w.)
No. 4 Ellis	7-29-27	1,327-34	1,334	350
No. 5 Ellis	8- 4-27 (Shot 5 qts.	1,327-40 1,335-40 ft.)	1,342	200
No. 6 Ellis	7- 8-27	1,323-29 (Shot 9 qts.)	1,329	15
No. 9 Ellis	8-11-27	1,327-40 (Shot 10 qts.)	1,341	200
No. 10 Ellis	8-11-27	1,320-45½	1,345½	750
No. 11 Ellis	8-11-27	1,321-35	1,336	368
Cranfill & Reynolds No. 1 Smith	8- 9-27	1,318-38	1,338	325
Roxana Pet. Corp. No. 1 Smith	8- 9-27	1,331-46	1,347	621
No. 3 Smith	8-11-27	1,316-42	1,343	1,440
C. O. Moore Oil Co. No. 1 E. G. Wright	7- 3-27		1,335	Dry
Gilman & McMurry No. 1 E. G. Wright	7.15-27	1,318-25 1,340-45	1,375	Dry

DEMAND FOR SPACE AT EXPOSITION IS EXCEEDING EARLY EXPECTATIONS

Early expectations of the demand for space by exhibitors for the International Petroleum Exposition to be held in Tulsa September 24 to October 1 have been exceeded, according to exposition officials. A list of firms contracting for space, as announced by J. Burr Gibbons, general manager of the exposition, follows:

Advance Rumley Thresher Co., Wichita, Kans.
Allan, Geo. B., & Co., Dallas, Tex.
Allegheny Steel Co., Brackenridge, Pa.
Allis-Chalmers Manufacturing Co., Buffalo, N. Y.
Aluminum Corp. of America, New Kinsington, Pa.
American Car & Foundry Co., St. Louis, Mo.
American Fomon Co., Philadelphia, Pa.
Andrews Steel Co., Newport, Ky.
Armstrong Brothers Tool Co., Chicago, Ill.
Armstrong Machine Works, Three Rivers, Mich.
Robert N. Atmore Co., Tulsa.
Automatic Electric, Inc., Chicago, Ill.
B. & A. Specialty Co., Tulsa.
Baird Tool Works, Philadelphia, Pa.
Barber-Greene Co., Aurora, Ill.
Barco Manufacturing Co., Chicago, Ill.
Barnsdall Refineries, Inc., Tulsa.
Barton, Manning & Warner Co., Alhambra, Calif.
Bennett Pumps Co., Muskegon, Mich.
Bessemer Gas Engine Co., Grove City, Pa.
Bethlehem Foundry & Machine Co., Bethlehem, Pa.
Billings & Spencer Co., Fort Worth, Tex.
Bovaird Supply Co., Tulsa.
Braden Steel & Winch Co., Tulsa.
Braun, C. F., Co., Alhambra, Calif.
Breene, H. H., Tulsa.
Bristol Co., The, Waterbury, Conn.
Brown Instrument Co., Tulsa, Okla.
Brooks Engineering Co., Los Angeles, Calif.
Buda Engine Co., Harvey, Ill.
Bur. Corporation, Tulsa.
Caterpillar Tractor Co., Peoria, Ill.
C. & G. Cooper Engine Co., Mt. Vernon, Ohio.
Cameron Tool & Supply Co., Cameron, W. Va.
C. F. Camp Co., Tulsa.
Campbell, J. A., Long Beach, Calif.
Chaplin-Fulton Mfg. Co., Pittsburgh, Pa.
Chicago Bridge & Iron Works, Chicago, Ill.
Chicago Pneumatic Tool Co., New York, N. Y.
Clark Brothers Co., Tulsa.
Close-To-Nature Co., Colfax, Iowa.
Clear Vision Pump Co., Wichita, Kans.
Climax Engineering Co., Clinton, Iowa.
Coen Company, Tulsa.
Crane Packing Co., Chicago, Ill.
Davis, G. M., Regulator Co., Chicago, Ill.
Dearborn Chemical Co., Chicago, Ill.
DeLaval Separator Co., Chicago, Ill.
DeVilbiss Co., Toledo, Ohio.
Dickson, L. E., Breckenridge, Tex.
Dow Pump & Diesel Engine Co., Alameda, Calif.
Dunn Manufacturing Co., Oxnard, Calif.
Economy Pump Co., Tulsa, Okla.
Equipment Manufacturing Co., Tulsa.
Federal Malleable Steel Co.
Federal Supply Co., Tulsa.
Filling Station, The, Houston, Tex.
Fluor Construction Co., Tulsa.
Foamite-Childs Co., Utica, N. Y.
Foxboro Co., Foxboro, Mass.
Foos Engine Co., Springfield, Ohio.
France Packing Co., Philadelphia, Pa.
Gaso Pump & Burner Co., Tulsa.
General Electric Co., Schenectady, N. Y.
General Motors Truck Co., Detroit, Mich.
Gilbert & Barker Mfg. Co., Springfield, Mass.
Goulds Pumps, Inc., Seneca Falls, N. Y.
Griscom-Russell Co., New York, N. Y.
Gulf Publishing Co., Hous on, Tex.
Gustin-Bacon Manufacturing Co., Kansas City, Mo.
Halliburton Oil Well Cementing Co., Duncan, Okla.
Heeter, C. M., Sons & Co., Inc., Butler, Pa.
Hercules Motors Corp., Canton, Ohio.
Highland Body Mfg. Co., Cincinnati, Ohio.
Highway Trailer Co., Edgerton, Wis.
Hill, Hubbell & Co., Tulsa.
Hinderliter Tool Co., Tulsa.
Hope Engineering & Supply Co., Mt. Vernon, Ohio.
Hufford Oil Well Reamer, Kansas City, Kans.
Hurley Gasoline Co., Tulsa.
Hutchinson Engineering Works, Chicago, Ill.
Insulating Products Co., Chicago, Ill.
International Filter Co., Chicago, Ill.
Kemper-Thomas Co., Cincinnati, Ohio.
Kennedy-Plumb Corp., St. Louis, Mo.
Keystone Driller Co., Joplin, Mo.
Kohler Company, Kansas City, Mo.
Leland Truck Equipment Co., Tulsa.
Linde Air Products Co., New York City, N. Y.
Lufkin Foundry & Machine Co., Lufkin, Tex.
Lunkenheimer Co., Cincinnati, Ohio.
MacClatchie Manufacturing Co., Compton, Calif.
Mack International Motor Truck Corp., New York, N. Y.
Magneto Ignition Corp., Tulsa.
Maloney Tank Mfg. Co., Tulsa.
Manzel Brothers Co., Buffalo, N. Y.
Marland Refining Co., Ponca City, Okla.
Martin Wagon Co., Lufkin, Tex.
Mason Regulator Co., Boston, Mass.
Merco Nordstrom Valve Co., New Orleans, La.
Metric Metal Works, Erie, Pa.
Mid-Continent Map Co., Tulsa.
Mid-Continent Petroleum Corp., Tulsa.
Miller, E. E., Los Angeles, Calif.
Miller Combination Boiler & Pump Co., Sapulpa, Okla.
Miller Improved Gas Engine Co., Springfield, Ohio.
Mine Safety Appliance Co., Pittsburgh, Pa.
Nabors, W. C., Co., Mansfield, La.
National Brake & Electric Co., Chicago, Ill.
National Meter Co., Chicago, Ill.
National Petroleum News, Cleveland, Ohio.
National Tank Co., Tulsa.
National Tank Seal Co., Tulsa.
National Turnbuckle Derrick Co., Tulsa.
Neilson Manufacturing Co., Tulsa.
Newton Process Mfg. Co., Fullerton, Calif.
Niles Tool Works Co., Hamilton, Ohio.
Norval & Dial, Inc., Tulsa.
North American Tank Car Corp., Tulsa, Okla.
Nuttall, R. D., Co., Pittsburgh, Pa.
Oakite Products, Inc., New York, N. Y.
O'Bannon, Walter, Co., Tulsa.
Ohio Injector Co., Wadsworth, Ohio.
Ohio Steel Foundry Co., Springfield, Ohio.
Oil Age Publishing Co., Los Angeles, Calif.
Oil Conservation Engineering Co., Cleveland, Ohio.
Oil City Iron Works, Shreveport, La.
Oil Field Engineering, Los Angeles, Calif.
Oil Weekly, The, Hous on, Tex.
Oil Well Improvement Co., Tulsa.
Oklahoma Iron Works, Tulsa.
Oklahoma Natural Gas Co., Tulsa.
Oklahoma Steel Castings Co., Tulsa.
Oklahoma Rig & Supply Co., Muskogee, Okla.
Parkersburg Rig & Reel Co., Parkersburg, W. Va.
Peerless Supply Co., Tulsa.
Permutit Company, New York, N. Y.
Petroleum Electric Co., Tulsa.
Pittsburgh Equitable Meter Co., Pittsburgh, Pa.
Pittsburgh Steel Products Co., Pittsburgh, Pa.
Powell, William, Co., Cincinnati, Ohio.
Power Manufacturing Co., Marion, Ohio.
Power Plant Equipment Co., Kansas City, Mo.
Prairie Oil & Gas Co., Tulsa.
Pyle National Co., Chicago, Ill.
Pyrene Manufacturing Co., Kansas City, Mo.
Quigley Furnace Specialties Co., New York, N. Y.
Reading Iron Co., Reading, Pa.
Reading Steel Casting Co., Inc., Bridgeport, Conn.
Refiner and Natural, The, Houston, Tex.
Refinery Supply Co., Tulsa.
Republic Truck Sales Corp., Alma, Mich.
Ridge Tool Co., Elyria, Ohio.
Ryan Motor Co., Tulsa.
Selden Sales & Service Co., Tulsa, Okla.
Shaffer Tool Works, Brea, Calif.
Sherwin-Williams Co., Tulsa.
Shreveport Chemical Co., Shreveport, La.
Sivyer Steel Casting Co., Milwaukee, Wis.
Skelly Oil Co., Tulsa.
Skinner Brothers Belting Co., Tulsa.
Smith Separator Co., Tulsa.
Snap-On Wrench Co., Kansas City, Mo.
Sonner, P. J., Gas Burner Co., Winfield, Kans.
Southern Mill & Manufacturing Co., Tulsa.
Southwestern Engineering Corp., Los Angeles, Calif.
Spang & Co., Butler, Pa.
Specialty Oil Tool Co., Las Angeles, Calif.
Spencer Trailer Co., Augusta, Kans.
Standard Lift Co., Memphis, Tenn.
Stanley Belting Co., Chicago, Ill.
Star Drilling Machine Co., Chanute, Kans.
Staytite Company, Houston, Tex.
Stearns-Roger Manufacturing Co., Denver, Colo.
Stefco Steel Co., Tulsa.
Stoody Products Sales Co., Tulsa.
Stough Tank Erecting Co., Tulsa.
Sullivan Company, Memphis, Tenn.
Sullivan Machinery Co., Chicago, Ill.
Surface Equipment Co., Tulsa.
Sweet, William J., Foundry Co., Irvington, Newark, N. J.
Tagliabue, C. J., Manufacturing Co., Brooklyn, N. Y.
Taylor Instrument Co., Tulsa.
Temple.on, Kenly & Co., Ltd., Chicago, Ill.
The Texas Company, Houston, Tex.
Timken Roller Bearing Co., Canton, Ohio.
Traction Machine Co., North Baltimore, Ohio.
Tulsa Boiler & Machinery Co., Tulsa.
Tuthill Pump Co., Chicago, Ill.
Thrift Corp., Houston, Tex.
Union Machine Co., Bartiesville, Okla.
United Carbon Co., Charleston, W. Va.
United Iron Works, Tulsa.
Henry Vogt Machine Co., Louisville, Ky.
Volz Engineering Co., Los Angeles, Calif.
Wall Rope Works, Bartiesville, Okla.
Waukesha Motor Co., Waukesha, Wis.
Wailes Dove-Hermiston Corp., New York, N. Y.
Walworth Company, New York, N. Y.
Welders Supply Co., Tulsa.
West American Rubber Co., Los Angeles, Calif.
Westcott & Greis, Inc., Tulsa.
Whealton & Townsend, Inc., Los Angeles, Calif.
E. B. Wiggins, Los Angeles, Calif.
J. H. Williams & Co., Buffalo, N. Y.
Wise & Schlegel Pumps, Tulsa.
Worthington Pump & Machinery Co., New York City, N. Y.
Zero Hour Torpedo Co., Tulsa.

MARLAND OFFICE PICNICS

The annual picnic of the' employes of the Chicago office of the Marland Refining Co. and invited guests was held at Spring Hill Grove, St. Johns, Ind. The day was spent in games of all kinds, including baseball, golf and swimming. The Grove is about 30 miles from Chicago and 10 miles from Hammond, where the company has its storage and compounding plant.

AUGUST MOTOR CAR OUTPUT

Production of motor cars has been accelerated rapidly in the last few weeks and indications are that the August total will be close to the highest mark of the year for the companies exclusive of Ford, according to Automotive Industries.

NEGOTIATIONS FOR GAS FRANCHISE IN DENVER MAKING PROGRESS

By Tolbert R. Ingram

DENVER, Colo., Aug. 20.—Negotiations between the city of Denver and the Public Service Co. of Colorado, a subsidiary of the Cities Service Co., looking towards an agreement on terms for the replacement of manufactured gas for domestic and industrial consumption in Denver with natural gas from the Amarillo Field in Texas made considerable progress during the past week. The city council, by unanimous vote, adopted a resolution "that it be the sense of this council that natural gas be brought to Denver if it can be brought here at a fair and reasonable rate." This was followed by representatives of the company announcing that the proposed rates submitted by it were subject to further negotiations. The result is that representatives of both sides are expected to make a determined effort within the next few days to reach an agreement that will be acceptable to both parties.

Upon the outcome of these negotiations depends to a very large extent the question of whether the Colorado Interstate Gas Co. will construct its proposed line from the Amarillo Field to Denver and intervening cities. The plans provide for the Public Service Co. purchasing gas at the city limits from the Colorado Interstae Gas Co., the former being the distributing company.

Situation Involved

The situation has been rather involved, not only on account of the question of rates for domestic consumption, but due to the opposition to bringing gas into Colorado on any terms by the coal mining interests, the railroads, organized labor and others who may be affected by the results. It is apparent that up to this time the various factions involved have been fencing for positions of advantage, lining up public sentiment and organizing for the final struggle. The issue had almost reached the point where it was doubtful if the city wanted natural gas upon any terms. This brought about the declaration by the city council that it favored bringing gas to Denver if it could be brought at a "fair and reasonable" rate. This served to narrow the issue down closely to the question of rates.

The rate schedule proposed by the Public Service Co. for domestic consumption was as follows: for the first 200 feet per month, $1.50; for the next 2,800 feet, 7.5 cents per 100 feet; for the next 7,000 feet, 6 cents per 100 feet; and in excess of 10,000 feet, 5 cents per 100 feet. The contract between the Public Service Co. and the Interstate Gas Co. provided for a rate of 40 cents per 1,000 feet at the city's limits for a period of 15 years, and for gas resold under industrial contracts 85 per cent of the price charged its customers by the Public Service Co.

Rates for manufactured gas charged by the Public Service Co. at present are 90 cents per 1,000 feet, with a minimum of 90 cents per month, and with 10 per cent added if bill is not paid when due. Much lower rates prevail for industrial consumption.

Rates which the Colorado Interstate Co. proposed to charge the Colorado Fuel & Iron Co. for its Pueblo mills, the largest single industrial contract to be negotiated, entered extensively into the situation. It was finally announced that this rate was 16 cents per 1,000 feet for the first 5 years and 18 cents for the next 5 years.

City Expert's Estimate

The city employed A. C. King, of Chicago, to make a report on the rates and feasibility of natural gas for the benefit of the council. His report stated that the project was feasible, and rates he suggested as being fair to the consumers and which would yield a fair return on the investment, were are follows: first 400 feet or less per month, 90 cents; for the next 600 feet, 15 cents per 100 feet; for next 1,000 feet, 12 cents per 100 feet; next 2,000 feet, 7.5 cents; next 6,000 feet, 6 cents; for the excess above 10,000 feet, 5 cents per 100 feet.

In the meantime the coal operators had taken a definite stand against the bringing in of gas on the theory that it would decrease the output of coal in the state to such an extent that wages would be reduced, large railroad tonnage would be lost, the state would lose in coal royalties, and tax collections would be less. Chambers of commerce in several of the mining towns joined in the protests and the railroads sided with the coal men, though, apparently not in quite as active opposition.

With these issues all brought into the question, it has become a matter of sifting down until a substantial basis for negotiations has been reached. This, apparently has been done, and the matter probably will be decided in conferences within the next few weeks.

INCOME TAX RULING ON OIL AND GAS LEASE

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 22.—Frequently there is confusion between a transaction in oil properties, making it difficult to determine whether such transaction is an oil and gas lease or a sale of capital assets within the meaning of Section 206 of the Revenue Act of 1921. Decisions in such cases have a considerable bearing upon taxation. In the case of D. R. McDonald against the Commissioner of Internal Revenue, the Board of Tax Appeals has had occasion to decide whether a transaction was an oil and gas lease or whether it was a sale of capital assets.

This proceeding is a determination of a deficiency of income tax for 1922 in an amount less than $10,000. The question was whether the consideration received by petitioner for leasing oil and gas rights in land owned by him in Arkansas falls within the classification of gains from the sale of capital assets as provided by Section 206.

In 1908, McDonald bought from his parents 160 acres of land in Union County, Arkansas, for $200. The property was cut-over timber land and McDonald proceeded to clear 30 acres and plant crops. After two years' residence on the land he leased it for farming purposes.

Just 10 years later an oil and gas well was drilled in Union County and three years after that a successful well was brought in some distance from the petitioner's land. In July, 1922, oil was discovered in this Smackover Field within which this property was located. In 1921 he leased 40 acres of his farm to the Smackover Oil & Gas Co. and received stock in that company in consideration of the lease. He leased other land to Pat Mall, to the Houston Oil Co. of Texas and to the Federal Petroleum Co., the granting clause in each of the leases involved herein reads substantially as follows:

"Have granted, demised, leased and let and by these presents do grant, demise, lease and let unto the said lessee, for the sole and only purpose of mining and operating for oil and gas, and laying pipe lines and of building tanks, towers, stations and structures thereon to produce, save and take care of said products, all that certain tract of land situated in the County of Union, State of Arkansas."

The lessees of the first and third tracts drilled wells upon them, but neither oil nor gas was found in paying quantities and the petitioner received no further income from this source during the taxable year. The respondent computed petitioner's tax liability for the year 1922 under Section 210 and 211 of the Revenue Act of 1921.

Judge Arundell rendered his opinion that the amounts received under the foregoing terms of the leases given by petitioner were in "gains from the sale or exchange of capital assets" within the meaning of Section 206 of the Act of 1921 and the commissioner's decision is affirmed. This followed the case of Berg vs. Commissioner.

WILDCAT OPERATIONS IN WEST TEXAS

JONES COUNTY
(Continued from Page 46)

Marland Oil Co.'s No. 1 Union Land, E cor. of W ¼ Sec. 28, Blk. 35, H. & T. C. Sur. — Rigging up Star machine.

CROCKETT COUNTY

George Anderson and Marland Oil Co.'s No. 1 University. — Drilling 1,330 ft.
V. T. Bolin & Co.'s No. 1 P. C. Coates, NW cor. SW Sec. 4, Blk. 2, I. & G. N. Sur. — Shut down 2,110 ft.
Corbett & Gill's No. 1 Todd — Rig.
Corbett & Gill's No. 1 University — Rigging up.
Gulf Production Co.'s No. 2 Powell-D. — Top salt 1,060 ft.; drilling 1,300 ft.
Gulf Production Co.'s No. 1 G. L. Thompson, SW cor. Sec. 71, Blk. 1, I. & G. N. Sur. — Black sulphur water 305 ft.; running 10-in. 360 ft.
Epeneaur et al's No. 1 Noelke, SW Sec. 30, Blk. GG, G. C. & S. F. Sur. — Spudded and shut down.
George A. Henshaw and Geyer Oil Co.'s No. 1 Noelke-Murphy, 660 ft. S and E of NW cor. Sec. 10, Blk. PP, T. C. Ry. Sur., A-5,148 — Rigging up.
J. K. Hughes' No. 2-B Powell, Sec. 63, E. L. & R. R. Sur., Elev. 2,783 feet — Fishing for 18 joints 8-in.; total depth 2,535 ft.; underreaming 6-in.
Magnolia Petroleum Co.'s No. 2 Shannon — Show oil 2,385-90 and 2,992 ft.; total depth 4,100 ft.; fishing 20 joints 8-in. casing.
Newman Oil Co.'s No. 1 B. C. Clark — Location.
William Shaffer et al's No. 1 University, C SE SE Sec. 9, Blk. 47, University Sur., elev. 2,344 ft. — Total depth 2,344 ft.; plugged back to 2,208 ft.; shot 10 qts. 2,170-95 ft.; shut down.
William Schaffer et al's No. 2 University, 1,350 ft. N and 2,610 ft. E of SW cor. Sec. 9, Blk. 47, Uni. Land. — Top salt 1,060 ft.; first oil show 2,190-96 ft.; second 2,225-29 ft.; shut down; about 30 ft. oil in hole.
W. W. Donnelly, Young, Logan & Hult's No. 1 Pierce, C SW Sec. 150, Blk. O. G. H. & S. A. Sur., elev. 2,105 ft. — Rainbow show 454 and 540 ft.; underreaming 1,378 ft.
Kirby Oil Co. and Taylor-Link Oil Co.'s No. 1 Powell. — Top salt 1,050 ft.; drilling 1,880 ft.
P. H. Williams' No. 2 L. P. Powell — Top salt 1,355 ft.; drilling 1,675 ft.
McMammon Oil Co.'s No. 1 Blakeney — Rig; drilling water well.
Young & Donnelly's No. 1 J. M. Shannon, C Sec. 11, Blk. 9, D. & S. E. Sur. — Spudded and shut down.

CULBERSON COUNTY

James H. Gardner et al's No. 1 Radford, C SE Sec. 29, Blk. 62, Public School Land Sur. — Shut down 545 ft.; crooked hole.
Scott & Dittman's No. 1 Miller, SW cor. NW NE Sec. 1, School Blk. 97 — Spudded and shut down.

DAWSON COUNTY

R. R. Penn's No. 1 Wright, elev. 2,842 ft. — Top salt 1,750 ft.; set 8-in. 2,449 ft.; building standard rig.

ECTOR COUNTY

J. S. Cosden, Inc., et al's No. 2 Connell-A, NW cor. NE Sec. 13, B-16, School Land, elv. 2,844 ft. — Top salt 870 ft.; top lime 3,177 ft.; first show 3,420-22 ft.; pay 3,471-3,515 ft.; 160 ft. oil in hole; shot 180 qts.; estimated 1,000,000 ft. gas; swabbed and flowed 82 bbls. June 30; cleaned out and shut down for orders; 800 ft. oil in hole.
J. C. Cosden et al's No. 3 G. W. Connell-A, SE cor., NE, Sec. 13, Blk. B-16. — Top salt 863 ft.; show oil 3,375 ft. and 3,499 ft.; top lime 3,195 ft.; shot 208 qts. 3,465-3,545 ft.; 300 ft. oil in hole; shut down.

FISHER COUNTY

Ideal Oil Co.'s No. 1 Jameson, C SE Sec. 111, Blk. 1, H. & T. C. Sur. — Hole full salt water 2,345-2,520 ft.; shut down for orders 3,304 ft.
Marland Oil Co. and Texon's No. 1 McCall, Sec. 108, Blk. 3, H. & T. C. Sur. — Rig.
Miley Oil Corp. and Marland Oil Co.'s No. 1 W. W. Ammons, Sec. 198, Blk. 3, H. & T. C. Sur. — Drilling 3,160 ft.
R. W. Raney's No. 2 Maberry, Sec. 56, Blk. 1, T. & P. Sur. — Shut down for orders 2,725 ft.
Sinclair Oil & Gas Co.'s (was Bourdon Royalty Co.'s) No. 1 J. A. Danise, Sec. 6, Blk. K, T. & P. Sur. — Drilling 2,450 ft.
The Texas Company's No. 1 D. S. Stevens, C SW SE SE Sec. 79, Blk. 1, H. & T. C. Sur. — 8-in. froze 2,302 ft.; fishing.

FOARD COUNTY

C. H. Clark et al's No. 1 Atkins, SW cor. Sec. 89, Blk. 44, H. & T. C. Sur. — Rig; moving in tools.
Fain-McGaha Oil Corp.'s No. 1 Mathews. — Made 50 bbls. 1,484-94 ft.; 4,000,000 ft. gas at 1,668-73 and 1,676-81 ft.; more gas 1,847-51 ft. and 1,863-64 ft.; total depth 1,875 ft.; lowering 8-in.
Humble O. & R. and Navarro Oil Co.'s No. 1 L. McAdams, C S ½ Sec. 27, Blk. L, S. P. Sur. — Hole full water 2,560 ft.; water sand 3,460-70 ft.; set 6-in. 3,488 ft.; total depth 3,575 ft.; trying to loosen 6-in.
The Texas Company's No. 1 Watkins — Drilling 1,944 ft.

GAINES COUNTY

Westheimer & Daube's No. 1 Birge & Forbes Land Co., Sec. 308, Terrell County School Land — Cemented 8-in. 3,900 ft. and shut down for cable tools.

GARZA COUNTY

Emerald Oil Co.'s No. 1 D. Boren, NW cor. NE Sec. 127, Blk. 5, H. & G. N. Sur. — Small show oil in gray lime 1,884-1,902 ft.; shut down 2,600 ft.; show oil and hole full water 2,420-60 ft.
Pandem Oil Co.'s No. 1 Justice, SW cor. NW Sec. 2, Blk. 6, H. & G. N. Sur. — Show gas and rainbow oil 2,140 ft.; drilling 2,510 ft.

GLASSCOCK COUNTY

California Co.'s No. 1 W. B. Currie, Sec. 215, Blk. 29. — Water sand 1,085-90 ft.; underreaming.
Green et al's No. 1 F. G. Oxsheer, Sec. 6, Blk. 34, T. & P. Sur., elev. 2,540 ft. — Top salt 1,245 ft.; drilling 2,530 ft.
Landreth Producing Corp.'s No. 1 A. L. Houston, elev. 2,611 ft. — Top salt 1,410 ft.; drilling 2,940 ft.
World Oil Co. and J. S. Meriwether's No. 1 L. S. McDowell, C SW Sec. 43, Blk. 34, Twp. 2-S, T. & P. Sur., elev. 2,553 ft. — Top salt 1,180 ft.; drilling up baller dart 2,975 ft.

HOWARD COUNTY

California Co.'s No. 1 Fisher Brothers, SE SW NW Sec. 36, Blk. 33, T. & P. Sur. T-1-S — Spudded 30 ft.
Fred Carey et al's No. 2 G. O. Chalk, SE NW Sec. 124, Blk. 29 — Shut down 1,040 ft.; hole full salt water.
W. W. Donnelly et al's No. 1 Martin, SE cor. Sec. 41, Blk. 33, T-2 N. T. & P. Sur., elev. 2,552 ft. — Building standard rig 2,100 ft.
Henshaw et al's No. 1 S. T. Eason, Sec. 6, Blk. 32, T. & P. Sur., T-2-S. — Show oil 1,340-54 ft.; shot 40 qts.; 10 ft. oil in hole.
Marland Oil Co. and Zoch's No. 1 Jones, Sec. 32, Blk. 27, T. & P. Sur., elev. 2,218 ft. — Shut down 500 ft.
Marland Oil Co.'s No. 1 A. M. Fisher, Sec. 1, Blk. 33, T. & P. Sur., T-2-S, elev. 2,730 ft. — Shut down 1,500 ft.
Marland Oil Co.'s No. 1-A Guitar Trust Est. — Rig.
Marland Oil Co.'s No. 1 A. G. Haines, C SE Sec. 26, Blk. 32, T. & P. Sur. T-1-N — Spudding.
Peer Oil Corp.'s No. 1 Read, C NW Sec. 39, Blk. 30, T. & P. Sur. T-1-N — Moving in rig.
Texon O. & L. Co. and Marland Oil Co.'s No. 1 Mrs. Connaly — Location.
Texon O. & L. Co.'s and Marland Oil Co.'s No. 2 W. R. Settles — Underreaming 10-in. 845 ft.
Texon O. & L. Co. and Marland Oil Co.'s No. 1 Mabel O. Quinn — Drilling 1,480 ft.

HUDSPETH COUNTY

Lockhart Brothers' No. 1 Gardner & Moseley, C SE Sec. 5, School Blk. 21 — Shut down 235 ft.

IRION COUNTY

Cash Dollar et al's No. 1 G. J. Bird, NE Sec. 16, Blk. 10, S. P. R. R. Sur. — Shut down 2,500 ft.

JEFF DAVIS COUNTY

Humble O. & R. Co.'s No. 2 Crecencio Flores, 1,130 ft. N and 850 ft. E of SW cor. Sec. 34, Blk. 58, T. & P. Sur., Twp. 8 — Straightening hole 200 ft.
Cole & Hart's No. 1 Joe Dillard, NW cor. Sec. 2, Blk. 17, T. & P. Sur. — Digging slush pit.
Midwest Exploration Co.'s (was Campbell et al's) No. 1 L. H. Herndon, Sec. 6, M. E. P. & P. Sur., elev. 1,832 ft. — Top pay 2,498 ft.; deepening to 2,524 ft.; swabbed 115 bbls.; shut down for orders 3,009 ft.
Garland & D'amond's No. 1 E. D. Glynn, SE cor. Sec. 18, Deaf & Dumb Asylum Lands — Seven bailers salt water per hour at 1,465-1,500 ft.; hole full water 1,900-07 ft.; fishing for bit.
Gillette & Hickey's No. 1 M. E. Young, Tevanio Sur. No. 190 — Drilling 1,950 ft.
Hutson & Weaver's No. 1-A Smith, Sec. 51, Blk. 18, T. & P. Sur. — Shut down for fuel and casing 800 ft.
Kirk & Brewer's No. 1 J. H. Milsap, Justo Rodriguez Sur., League 357 — Hole full salt water 2,403-10 ft.; rainbow show oil 2,720 ft.; total depth 2,910 ft.; shut down.
Marston Oil Co.'s No. 1 E. Howell, NW cor. SE W ½ of N 400 acres, Sec. 20, Blk. 19, T. & P. Sur. — Small show oil 2,496 ft.; shut down 2,545 ft.
Marston Oil Co.'s No. 1 J. S. Swan, Robert Spears Sur. No. 280 — Hole full salt water 2,390-2,400 ft. and 2,435 ft.; hole full salt water 3,015-20 ft.; shut down 3,503 ft.
W. G. Stough and others' No. 1 J. P. Willis, J. C. Patterson Sur. No. 2 — Drilling 1,715 ft.
Stebbins Oil Co.'s No. 2 Higgs, SE cor. Sec. 30, W. T. Scott Sur. — Location.
Swensondale Oil Co.'s No. 1 Caton, SW NW Sec. 9, Deaf & Dumb Asylum Lands — Drilling 2,505 ft.
Tomberlin et al's No. 1 Oscar Clapp, CSL SW Sec. 37, Blk 16, T. & P. Sur. — Shut down 2,083 ft.

KENT COUNTY

Douglas Oil Co.'s No. 1 Scoggins, Sec. 57, Blk 7, H. & T. C. Sur. — Shut down for orders 4,500 ft.; hole full sulphur water 4,475-4,500 ft.
Marland Oil Co. and Texon O. & L. Co.'s No. 1 Bilby, Sec. 41, Blk. K, Thompson Sur. — Location.

KNOX COUNTY

Deep Rock Oil Co.'s No. 1 Beavers, CSL Sec. 224, Blk. 44, elev. 1,441 ft. — Total depth 2,865 ft.; rig rebuilt.
Deep Rock Oil Co.'s No. 1 Big Four, 1,270 ft. S and 2,590 ft. W of NE cor. Sec. 31, Blk. 4 — Cleaning out 1,150 ft.
Humble O. & R. Co.'s No. 1 Goode, 1,940 ft. S and 200 ft. W of NE cor. Sec. 7, H. T. & B. Sur. — Hole full water 1,710-15 ft., and 2,760-2,800 ft.; drilling 3,176 ft.
The Texas Company's No. 1 J. O. Bowden, Sec. 115, Blk. 45, H. & T. C. Sur. — Lime 1,240-45 ft.; estimated 100,000 ft. gas; hole full water 1,835 ft.; pipe stuck at 2,130 ft.
The Texas Company's No. 1 Teague — Drilling hard lime 2,650 ft.

LOVING COUNTY

Kingwood Oil Co.'s No. 1 T. O. Moore, C NE Sec. 2, Blk. G-25, Public School Land, elev. 3,120 ft. — Top salt 1,210 ft.; show gas 1,600-15 ft.; drilling 3,350 ft.
Owens & Sloan's No. 1 W. D. Johnson, C SE Sec. 20, Blk. 53, T-2, T. & P. Sur., elev. 2,934 ft. — Shut down 1,020 ft.; in litigation.

LYNN COUNTY

The Hart Oil Corp.'s No. 1 C. O. Edwards, NW NW Sec. 5, Blk. 2, L. & S. V. Sur. — Shut down 1,400 ft.

MIDLAND COUNTY

Orbit Oil Co.'s No. 1 Moreland, C SE Sec. 17, Blk. 39, T. & P. Sur. T-1-S — Shut down 185 ft.

MITCHELL COUNTY

Robert Thraves' No. 1 C. Way, Sec. 91, Blk. 27, T. & P. Sur. T-1-N — Total depth 2,508 ft.; repairing rig.
Magnolia Petroleum Co.'s No. 1 T. L. McKenney, Sec. 20, Blk. 29, T. & P. Sur. T-1-N — Shut down for orders 4,208 ft.; hole full water.
Tex-O-Kan Oil Co. and Robert Thraves' No. 1 W. F. Sanders — Shut down for 6-in. 2,673 ft.
B. E. Walter et al's No. 1 J. E. Dollen, NW cor. SW Sec. 11, Blk. 27, T. & P. Sur. — Shut down 3,955 ft.; hole full sulphur water.

NOLAN COUNTY

J. H. Winemiller Corp.'s (was Peters et al's) No. 1 Booth, Sec. 90, Blk. 21, T. & P. Sur. — Set 6-in. 1,830 ft.; drilling 2,045 ft.
Herbert Oil Co.s (was McClesky and others') No. 1 Pepper, SE cor. SW Sec. 29, Blk. 22, T. & P. Sur. — Rigged up and shut down
Zweifel and others' No. 1 Longbotham, C SE Sec. 130, Blk. 1, H. & G. N. Sur. — Set 8-in. 2,535 ft.; drilling 2,570 ft.

PECOS COUNTY

Allsman & Bell's No. 2 Pecos River Bed — Top salt 400 ft.; shut down in anhydrite 1,509 ft.; contract complete.
Benedum & Trees' No. 1 J. C. Trees, C NW SE SE Sec. 30, Blk. 7, H. & G. Sur., elev. 2,556 ft. — Flowed sulphur water 3,250 ft.; shut down 3,335 ft.
Buell et al's No. 1 Batcheler, C N ½ NE Sec. 89, Blk. OW, G. C. & S. F. Sur., elev. 3,188 ft. — Show oil 1,700 ft.; flowed sulphur water 1,775 ft.; fishing 2,740 ft.
Buell & Hagan's No. 1 Jasper, 1 mi. S and W NE cor. Jasper Co. School Land No. 104 — Drilling 900 ft.
California Co.'s No. 2 I. G. Yates — New location; rig.
California Co.'s No. 1 M. A. Smith — New location; building rig.
M. C. Dibble & Hale's No. 1 Bonebrake, Sec. 115, Blk. 8, I. & G. N. Sur. — Shut down 500 ft.
Bob Elmore's No. 1 M. Holmes, Sec. 542, Blk. 1, I. & G. N. Sur., elev. 2,176 ft. — Top salt 335 ft.; drilling 1,370 ft.
Garland & Mott's No. 1 El Paso Cattle Loan Co., C NE Sec. 26, Blk. 126, T. & S. P. Sur., elev. 2,582 ft. — Drilling 2,340 ft.
Gulf Production Co.'s No. 1 Smith, NE cor. Sec. 28, Blk. 194 — Total depth 520 ft.; underreaming 12-in. at 440 ft.
Geo. A. Henshaw, Jr., No. 1 Snyder, Sec. 29, Blk. 144, T. & St. L. Sur. — Location.
Humble O. & R. Co.'s No. 1 M. A. Smith, NE cor. Sec. 36, Blk. 194, G. C. & S. F. Sur. — Moving in machine.
McMan and Marland's No. 2 I. G. Yates — New location.
McMan and Marland's No. 3 I. G. Yates — New location.
McMan and Marland's No. 4 I. G. Yates — New location.
McMan and Marland's No. 4-B I. G. Yates — New location.
McMan and Marland's No. 1-D I. G. Yates — Clearing location.
Marland Oil Co.'s No. 1 Yates, NE cor. Sec. 60, Blk. 1, I. & G. N. Sur., elev. 2,172 ft. — Small show oil and gas 445 ft.; 10 bailers fresh water per hour at 465 ft.; total depth 843 ft.; cementing 8-in.
Mazda Oil Co.'s No. 1 M. A. Smith, NE cor. NW Sec. 24, Blk. 194, G. C. & S. F. Sur., elev. 2,720 ft. — Top salt 850 ft.; 100 ft. oil in hole 1,468-72 ft.; top pay 1,581 ft.; total depth 1,584 ft.; made 20 bbl. head.
Mid-Kansas and Transcontinental Oil Co.'s No. 2 Smith-Taylor — Moving in material.
Mid-Kansas and Transcontinental's No. 3 Yates-B. — Flowed 525 bbls. first hour and 457 bbls. second hour at 888-913 ft.
Mid-Kansas and Transcontinental's No. 7 Yates-A — 2,000,000 ft. gas at 1,200 ft.; top pay 1,227 ft.; drilling 1,249 ft.; flowed 297 bbls.
Mid-Kansas and Transcontinental's No. 8 — Spudding.

Quinby Oil Co.'s No. 1 Townsite, Sec. 1, Blk. 267, Client Addition Sur. Fort Stockton, elev. 2,980 ft. ..... Shut down 3,440 ft.
Quinby Oil Co.'s No. 2 Bennet, C NW 592, Blk. 105, G. C. & S. F. Sur., elev. 2,560 ft. ..... Shut down 1,457 ft.
Quinby Oil Co.'s No. 1 A. A. Gray, 660 ft. N and 1,320 ft. E SW cor. Sec. 593, Abst. 3,009 ..... Shut down 700 ft.
Red Bank Oil Co.'s No. 1 McKenzie, C N ½ Sec. 21, Blk. 126, T. & St. L. Sur., elev. 3,256 ft. ..... Show sulphur water 2,641 ft.; hole full water 2,660 ft.; drilling 2,755 ft., lime.
Roxana Petroleum Co.'s No. 1 J. H. Tippett ..... New location.
W. R. Shankel et al's No. 1 I. G. Yates, CSL SW SE SE Sec. 58, Blk. 1, I. & G. N. Sur., elev. 2,220 ft.... Top salt 425 ft.; 40 ft. oil 1,313 ft.; sulphur water 1,478-79 ft.; water plugged off; shut down.
Simms Oil Co.'s No. 1 M. A. Smith, SW cor. Sec. 103, Blk. 194 ..... Moving in machine.
Simms Oil Co.'s No. 2 A. J. Devlin ..... New location; spudded 100 ft.
Transcontinental Oil Co.'s No. 1 Blackstone & Slaughter, Sec. 29, Blk. 129, F. St. L. Sur. ..... Rigging up.
World Oil Co.s No. 1 Serf, SW cor. NE Sec. 10, Blk. 130, T. & St. L., elev. 3,245 ft. ..... Location.

PRESIDIO COUNTY

Headlock & Millers No. 1 Tootie est., Sec. 123, Blk. 3, D. & P. Sur., elev. 2,912 ft. ..... Salt water 2,610 ft.; drilling 2,810 ft.
Pinto Canyon Oil Co.'s No. 1 Fields, 1,760 ft. S & E NW cor. Sec. 74, Blk. 2, D. & P. Sur. ..... Location.

REAGAN COUNTY

Henshaw & Camps No. 1 University, Sec. 14, Blk. 48, University Land ..... Rig shut down.
Texon O. & L. Co.s No. 1-B University, Group 1 ..... Top pay 6,284 ft.; shut down for motor 6,590 ft. with 3,800 ft. of 38.7 gravity oil in hole.
Marland Oil Co.s No. 1 University-Anderson, Sec. 19, Blk. 58, University Land ..... Location.

REEVES COUNTY

Exploration Co.s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land..... Spudded 20 ft. and shut down.
David R. Thompsons No. 1 A. A. Eddins ..... Drilling 600 ft.
World Oil Co.s No. 1 Biggs, C SE Sec. 65, Blk. 112, Public School Land Sur., elev. 3,068 ft..... Shut down 1,610 ft.; tools moved to No. 1 Duff.
World Oil Co.s No. 1 Duff, elev. 2,753 ft. ..... Show gas with six bailers oil and hole full of water 2,648-50 ft.; fishing two strings tools 3,655 ft.; 2,000 ft. fluid in hole.

RUNNELS COUNTY

Noble Oil Co.s No. 1 Simms, Sec. 12, J. J. McHenry Sur... Shut down 1,675 ft.; underreaming 10-in.

SCHLEICHER COUNTY

Beavers & Leath et als No. 1 J. A. and W. T. Whitten, C NW Sec. 35, Blk. 11, T. O. Sur. ..... Shut down 400 ft.
Thomas Grey et als No. 1 Ball Robinson, C NW Sec. 25, Blk. M, G. H. & S. A. Sur. ..... Sulphur water 2,125 ft.; hole full water 2,160-80 ft.; cleaning out 2,245 ft.

STERLING COUNTY

L. Littles No. 1 Fisher Bros., Sec. 1, Blk. T. T. & P. Sur.. Drilling 1,460 ft.
Orr et als No. 1 Neal Reed, CNL Sec. 15, Blk. 30, W. & N. W. Sur. ..... Drilling 1,390 ft.
J. P. Williams' No. 3 Clark..... Drilling 550 ft.

STONEWALL COUNTY

Peer Oil Corp. and Producers Oil Co.'s (was J. P. Johnson's) No. 1 R. P. Morrow ..... Underreaming 10-in.; total depth 1,235 ft.
R. F. Garland & Co.s (was McCamey & Zochs) No. 1 J. Ward, C SW Sec. 153, Mrs. Ward Dobbs Sur., 3 mi. NW of Aspermont ..... Drilling 3,000 ft.

TAYLOR COUNTY

A. J. Brown et als No. 1 Henslee, NE cor. Sec. 5, Blk. 4, S. P. R. R. Sur. ..... Drilling 1,550 ft.
Dorning & Perrines No. 1 J. A. Hammer, C N 100 acres, Sec. 23, Blk. 19, T. & P. Sur., elev. 1,904 ft.. Shut down 455 ft.
Gilbert Johnsons No. 1 C. M. Brown, Sec. 1, Blk. 6, T. & P. Sur. ..... Spudded and shut down.
Morrison & Thompsons No. 1 Mrs. Alice Rose, SW cor. NE Sec. 29, Blk. 19, T. & P. Sur., Sur. elev. 1,925 ft.. Shut down 2,540 ft.; fishing tools
Owen & Sloans No. 1 Lattimer, Sec. 14, Blk. 9, T. & P. Sur. ..... Underreaming 6-in. 2,465 ft.
Roeser & Pendleton's No. 1 Sam Hutman, C W ½ NW Sec. 64, Blk. 5, T. & P. Sur. ..... Underreaming 10-in. 1,114 ft.; total depth 1,240 ft.
World Oil Co.s No. 1 J. R. Griffith, SW cor. NE Sec. 32, Blind Asylum Land, elev. 1,747 ft. ..... Water at 2,850 ft.; total depth 3,514 ft.; pulling 6-in. to reset.

TERRY COUNTY

Kingsland Oil & Potash Co.s No. 1 Brownsfield, C NW SW SW Sec. 7, Blk. 1-A, E. L. R. R. Sur. ..... Slight show gas 2,230 ft.; drilling 2,245 ft.

TOM GREEN COUNTY

George Amery's No. 1 Wilkey, C SW Sec. 3, B. A. L. Sur. ..... Location.
Dullahan et al's No. 1 Jacobs, Sec. 1,011, H. E. & W. T. Sur. ..... Shut down for orders 632 ft.
Fitzgerald et al's No. 1 Bennett ..... Drilling 1,025 ft.
Marland Oil Co.'s No. 1 Llano, 3,500 ft. S and 13,000 ft. W of NE cor. Llano Co. School Land No. 964.. Shut down 3,512 ft. for orders.
Tulsa Oil Co.'s No. 1 Adams, C SW Sec. 162, Blk. 11, S. P. R. R. Sur. ..... Shut down 735 ft.

UPTON COUNTY

Champlin O. & R. Co.'s No. 1 J. F. Lane, SW cor. SE Sec. 3, G. C. & S. F. Sur..... Drilling 1,875 ft.
Mark Curtis et al's (was Hultz et al's) No. 2 Giddings, 5,336 ft. S and 6,678 ft. E of NW cor. Throckmorton Co. School Land, League 1 ..... Moving in tools.
J. M. Hickey's No. 1 W. I. Gormley, 1,650 ft. from SW and SE lines Sec. 7, Blk. 36, H. & T. C. Sur. .... Top salt 472 ft.; drilling 555 ft.
Humble O. & R. Co.'s No. 6 Ricker, SE of No. 5 in Sec. 5, M. S. Denton Sur. ..... Top salt 595 ft.; drilling 1,140 ft.
Levi Smith and Marland's No. 1 University, C E ½ Sec. 17, Blk. 5, University Land ..... Hole full salt water 630-40 ft.; Underreaming casing 3,209 ft.
Marland Oil Co.'s No. 3 Burleson, T. C. Jones Sur. No. 100 ..... Shut down 4,610 ft.
Wise & Jackson's No. 1 J. H. Porter, SW cor. SW SW Sec. 184, Blk. E ..... Top salt 1,370 ft.; shut down for repairs 2,780 ft.

VAL VERDE COUNTY

A. Blume et al's No. 1 Moore est., Sec. 183, J. Mitchell Sur., elev. 953 ft. ..... Shut down 3,900 ft.
Curso Williams' No. 1 Holman, NE NE Sec. 5, Blk. N, G. H. & S. A. Sur. ..... Shut down 2,940 ft.
Douglas Oil Co.'s No. 1 Sellars, C SE Sec. 82, Blk. A, I. & G. N. Sur. ..... Total depth 3,010 ft.; reaming.
East Del Rio Oil Co.'s No. 1 Russell, SE cor. Sec. 183, Del Rio Town Sur. ..... Total depth 3,190 ft.; cleaning out.
Hiawatha Oil Co.'s No. 1 Sellars, C Sec. 1,031, Blk. A, I. & G. N. Sur... ..... Hole full salt water 2,455 ft.; drilling 3,250 ft.
Magnolia Petroleum Co.'s No. 1 Whitehead, Sec. 81, D, G. C. & S. F. Sur., elev. 1,770 ft. ..... Drilling 2,530 ft.
Independent Operators' No. 1 Whitehead, SE SE Sec. 30, Blk. 4, I. & G. N. Sur., elev. 1,175 ft. ..... Shut down 3,900 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I. & G. N. Sur., elev. 2,130 ft. ..... Gas sand 2,491-2,520 ft.; tested 125,750 ft. gas; reset 8-in. 2,511 ft.; shut down 2,801 ft.

WINKLER COUNTY

Amerada Pet. Corp.'s No. 1 J. B. Walton, SW cor. NW Sec. 48, Blk. 26 ..... Location.
Atlantic O. P. Co.'s No. 1 Ida Hendricks, SE cor. W ½ NE Sec. 44, Blk. 26 ..... Moving in rig.
Atlantic O. P. Co.'s No. 1 Hendricks, Sec. 34, Blk. B-5, elev. 2,823 ft. ..... Cemented 6-in. at 2,548 ft.; shut down 2,522 ft.
V. T. Bolin's No. 1 Ida Hendrick, C SE NE Sec. 4, Blk. B-5 ..... Location.
Cranfill Brothers' No. 1 M. J. Bashara, at cor. Secs. 10, 11, 22 and 23, School Blk. 77 ..... Moving in material
Cranfill & Reynolds' No. 1 Ida Hendrick, C SW NW NW Sec. 28, Blk. B-5 ..... Rotary, spudding.
Group 1 Humble O. & R. Co.'s No. 1 T. G. Hendricks, C SE Sec. 36, Blk. 27, elev. 2,823 ft. ..... Fishing lugs 1,920 ft.
Humble O. & R. Co.'s No. 1 T. G. Hendricks, NW cor. NE Sec. 34, Blk. B-5, Public School Land, elev. 2,816 ft. ..... Pocket of gas at 2,500 ft.; blew tools out through rig; estimated 5,000,000 ft. gas; shut down 2,756 ft.; gas increased from 8,000,000 to 15,000,000 ft.; blew tools up in hole; stuck in pipe.
Humble O. & R. Co.'s No. 2 T. G. Hendricks, SE cor. NE Sec. 34, Blk. B-5..... Drilling 400 ft.
Independent O. & G. Co.'s No. 1 J. S. Howe-D, NE cor. W ½ SE Sec. 44, Blk. 26 ..... Building rig.
Independent O. & G. Co.'s No. 1 Hendricks-A, elev. 2,816 ft. ..... 250,000 ft. gas 2,555-75 ft.; set 8-in. 2,595 ft.; rebuilt rig; shut down.
Independent O. & G. Co.'s No. 2 Hendricks-A, elev. 2,822 ft. ..... Drilling 2,290 ft.
Landreth Prod. Corp.'s No. 1 Grisham-Hunter, SW cor. SW NW Sec. 45, Blk. 26, School Land ..... Rotary; drilling 615 ft.
Landreth Prod. Corp.'s No. 2 Grisham-Hunter, SE cor. W ½ NW Sec. 45, Blk. 26 ..... Rigging rotary.
Landreth Prod. Corp.'s No. 1 Hendricks, SE cor. SW Sec. 29, Blk. B-5 ..... Building rig.
McCullough Oil Co.'s No. 1 Tobe Morton, CEL Sec. 20, Blk. L-12, Public School Land, elev. 2,750 ft. ..... Hole full salt water 1,940 ft.; top salt 2,100 ft; drilling 3,070 ft., anhydrite.
R. S. Matthews et al's No. 1 State, C Sec. 7, Blk. A-57, Public School Land Sur., elev. 3,120 ft. ..... Top salt 1,623 ft.; drilling 3,020 ft., anhydrite.
Murchison Oil Co., Cranfill Brothers and Marland's No. 1 Grisham-Hunter, NW cor. SW Sec. 35, Blk. B-5 ..... Top lime 2,280 ft.; 8,000,000 ft. gas 2,425 ft.; shut down for iron oxide.
Pure Oil Co.'s No. 2 Hendricks, elev. 2,827 ft..... Top salt 1,518 ft... top lime 2,390 ft.; cemented 8-in. 2,479 ft.; drilling plug.
Pure Oil Co.'s No. 1 Hendricks-B, NE cor. SE, Sec. 34, Blk. B-5 ..... Rotary; top salt 1,395 ft.; top lime 2,276 ft.; running casing 2,276 ft.
Republic Prod. Co.'s No. 1 Grisham-Hunter-A, NW cor. E ½ SW Sec. 45, School Block 26 ..... Building rig.
Republic Prod. Co.'s No. 1 Grisham-Hunter-B, SW cor. E ½ SE Sec. 41, Blk. B-5 ..... New location.
Roxana Petroleum Corp.'s No. 1 Grisham-Hunter-A, SW cor. E ½ NW Sec. 45, School Block 26 ..... Rig.
Roxana Petroleum Corp.'s No. 1 Grisham-Hunter-B, SW cor. S ½ SE Sec. 29, Blk. B-5 ..... Rig.
Roxana Petroleum Corp. and Llano Oil Co.'s No. 1 Scarborough, C Sec. 1, Blk. C-22, Public School Land, elev. 2,921 ft. ..... Top salt 1,115 ft.; hole full water 1,321 ft.; 10-in. set 1,570 ft.; top pay 2,990 ft.; second pay 3,124-28 ft.; swabbed 115 bbls. July 17; total depth 3,447 ft. (steel line measurement), sulphur water; plugged back to 3,347 ft.; raised pipe to 2,975 ft.; will shoot with 200 qts. 3,120-3,300
Southern Crude Oil Pur. Co.'s No. 3-C Hendricks, SE cor. NE Sec. 33, Blk. B-5, elev. 2,816 ft. ..... Top salt 1,870 ft.; little gas 2,630-40 ft.; shut down for orders 2,735 ft.; making 2,000,000 ft. gas and 1 bbl. oil; top lime 2,630 ft.
Southern Crude Oil Pur. Co.'s No. 4-C Hendricks..... Cemented 8-in. 2,525 ft.; small show oil and gas 2,660-65 ft.; gas increased 2,689-90 ft.; estimated 3,000,000 ft. gas 2,720 ft.; 1½ bbls. oil 2,735-40 ft.; shut down.
Southern Crude Oil Pur. Co.'s No. 1 T-88 Hendricks A-1, SE cor. NE Sec. 44, Blk. 26, elev. 2,854 ..... Top pay 2,930 ft.; drilling 3,060 ft.; slight increase; flowed 920 bbls. Aug. 20.
Southern Crude Oil Pur. Co.'s No. 1 T-88 Hendricks-B (was No. 1-D), SE cor. NE NW Sec. 4, Blk. B-12 .... Top lime 2,616 ft.; drilling 2,630 ft.
Southern Crude Oil Pur. Co.'s No. 1-F Hendricks, Sec. 33, Blk. B-5, NE cor. SE ..... Cemented 6-in. 2,529 ft.; standardizing.
Southern Crude Oil Pur. Co.'s No. 1 T-89 Grisham-Hunter-A, CWL NE SW Sec. 35, Blk. B-5 ..... Top salt 1,219 ft.; top lime 2,298 ft.; running 8-in. 2,310 ft.
Texon O. & L. Co.'s No. 1 Central State Bank, SW cor. W ½ SE Sec. 41, Blk. B-5, elev. 2,826 ft. ..... Top lime 2,340 ft.; set 6-in. 2,340 ft.; 3,000,000 ft. gas 2,460-70 ft. and 2,500-20 ft.; more gas 2,573 ft.; another pay at 2,795 ft.; estimated 25,000,000 ft. gas; blew control head off; running 5-in.; total depth 2,814 ft.
Texon O. & L. Co.'s No. 1 Grisham-Hunter-B, NW cor. W ½ SW Sec. 45, School Block 26 ..... Rig.
Texon O. & L. Co.'s No. 2 Grisham-Hunter-B ..... New location.
White Eagle O. & R. Co.'s (was Gibson & Johnson's), No. 1 R. A. Lock, 1,320 ft. W of NE cor. Sec. 30, Blk. 74, NW of discovery well, elev. 2,830 ft..... Total depth 1,875 ft.; cleaning out 30 ft. off bottom.
Southern Crude O. P. Co.'s No. 3 T-67 Hendrick-A, C SW NW NE Sec. 4, Blk. B-12 ..... Drilling 1,150 ft.
Southern Crude O. P. Co.'s No. 1 T-67 Hendrick-B, NE cor. SE Sec. 44, Blk. 26 ..... Drilling 1,000 ft.
Tidal Oil Co.'s (was L. D. Ladd et al's) No. 1 J. W. Amburgey, C Sec. 24, Blk. B-7, Public School Land.... Was completed at 3,447 ft. in June; now fishing tools same depth.
Southern Crude O. P. Co.'s No. 3 T-68 Grisham-Hunter-A, SW cor. W ½ NW Sec. 35, Blk. B-5 ..... Rigging up rotary.
Southern Crude O. P. Co.'s No. 1 T-88 Ida Hendricks-C, NW cor. Sec. 28, Blk. B-5 ..... New location.

NATURAL GASOLINE WINS DOLE PRIZE

(Continued from Page 148)

in Hawaii. The plane was equipped with a Wright Whirlwind air-cooled motor, similar in design to that used by Lindbergh in his flight to Paris.

Mr. Phillips became interested in the plane piloted by Goebel after his company had agreed to sponsor another plane known as the "Oklahoman." The latter plane, due to mechanical difficulties, was unable to take part in the race. Mr. Phillips furnished the funds which made it possible for Goebel to purchase his plane and compete in the race. It was named "Woolaroc," after Mr. Phillips' lodge, located near Bartlesville, Okla., the name being taken from "wood," "lake" and "rock."

Mr. Phillips has announced plans for an air derby to be held in Bartlesville in October. He plans to contribute $25,000 in prizes to winners of several contests. No "stunt" flying will be permitted, the contests being confined to tests which will aid in promoting practical aviation.

"I believe the world is in the vestibule of a new era in transportation," Mr. Phillips said, in announcing the air derby. "In order to encourage further development of aviation, I propose to give an international air meet at Phillips flying field in Bartlesville during October, personally offering $25,000 in cash prizes, in addition to cups, so that all aviators who desire may participate. Dates and details of the meet will be announced as soon as arrangements can be perfected."

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

The Question and Answer Department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

CLASSIFICATION OF FUEL OILS FOR FURNACE USE

Is there any definite meaning to the term furnace oils?—W. S.

This is part of a question which was answered July 14, under "Fuels for Domestic Heating," and the further information is given from statements made by F. A. Howard when addressing the American Oil Burner Association. He makes a separation of fuel oils into three general grades.

Furnace Oil.—This is the highest grade of distillate fuel oil which is generally distributed for use in oil-burning equipment not of the wick-feed type. It will give excellent results in practically all domestic oil burners and is the only type which will operate satisfactorily in the simple vaporizing burners. It is very close to being of the quality of kerosene. This product is required for use in a large percentage of burners, and justifies its somewhat higher price above other fuel oils through operating advantages which it possesses in an additional large percentage of the burners now in use.

Domestic Fuel Oil.—This classification is broader than the furnace oil and applies generally to all clean distillate petroleum products of good volatility, low viscosity, and low cold test. Products coming within this range are sold for other uses under the names of distillate fuel oil, gas oil, and Diesel oil. While the possible variations in properties between various grades of distillates of this character are considerable, the variations which would be met with in supplies from reliable sources purchased under the name of domestic oil fuel, and by virtue of the application of this name clearly intended for use in domestic oil burners, would be so small as to insure the delivery of a satisfactory product, and one which would be uniform enough to avoid difficulties in any equipment which is properly designed to handle this grade of fuel. There is a considerable proportion of such equipment at the present time.

Industrial Oil.—This is an extremely wide classification and is intended to include any liquid petroleum product of low value suitable for use in marine, railway, and industrial power plants. It is sufficiently standardized for the purposes for which it is sold. The single term fuel oil, without qualification, means this grade of product in the industrial world. The facilities required for delivery, handling, and burning this oil are very well worked out wherever the volume of demand is great, but the inherent nature of this grade of oil makes it very difficult to handle in small quantities. Although there are a limited number of domestic burner installations which will satisfac orily handle industrial fuel oil, the present sphere of usefulness of and demand for this product is practically confined to the large consumer; either the industrial consumer, or the hotel, apartment house, or office building.

QUALITY OF ABSORPTION OIL

Will you give me complete specifications covering the quality of absorption oil for use in a natural gasoline plant working at a pressure around 30 pounds?—R. E.

The type of absorbing tower, quantity of gas treated, kind of still and other conditions should be considered when selecting the oil, but the following general specifications may be of value:

Gravity, 29 to 38 A. P. I.

Initial, 350 to 450 degrees Fahrenheit.

Viscosity, Not below 100 Saybolt.

After shaking for five minutes, equal volumes of oil and distilled water there should be rapid separation of the two liquids and no cuff remain after 10 minutes standing.

Odor—The oil shall be free from objectionable odor.

Reaction—Neutral reaction.

Pour Test—The oil should flow easily at 30 degrees Fahrenheit.

Unsaturates—The loss of volume should not be over 10 per cent when treated with 2.5 times its volume of a mixture containing two parts of concentrated sulphuric acid and one part fuming sulphuric acid.

Many operators prefer high gravity oil for the absorption of gasoline, because it is easier to saturate, pumps well and has a high heat transfer rate. An oil which will give a good foam is considered to be better than an oil which remains dead after vigorous beating. The initial boiling point must always be higher than the endpoint of the product or there will be loss of oil and contamination of the gasoline.

TANK SHIPS FOR PETDOLEUM SERVICE

What is the demand for tank ships for transporting crude oil and petroleum products? Are there more of these ships now than there were a few years ago?—T. E. B.

There is an increasing demand for tankers for service in the petroleum business, it appears that an increase of approximately 10 per cent in the tonnage is needed each year. According to The Motor Ship, there are now 6,000,000 gross tons represented in the capacity of the tankers, as against only 750,000 tons in 1911. When based on an increase of 10 per cent, the annual addition of new tankers should be 600,000 gross tons for absorbing the natural or average increase in the volume of business. This does not make any allowance for the replacement of obselete vessels.

It is estimated that there are now building or ordered 146 vessels with a deadweight tonnage of 1,360,000, which is equivalent to approixmately 980,000 gross tons. Of this there will probably not be more than 750,000 gross tons commissioned within the year. The indications are that with the opening up of the foreign markets there will be increased demands for tankers, so the present building program cannot be excessive.

SAMPLING CRUDE OIL TANKS AND LINES

Will you please give me a brief description of and the purpose for thieving oil tanks and testing crude oil from samples taken from lines, so one not familiar with this work can understand how it is done and for what purpose? Working tanks are especially thiefed the first of each month, receiving and delivery ends of pipe lines take samples and test for gravity, B. S. and water. Please explain these operations. M. A .C.

A thief is an instrument provided with a movable bottom, which may be set in an open position and closed at will, commonly used for withdrawing oil from any desired level in a tank. At least one side of the thief is of glass, which is graduated. With the bottom open the thief is lowered from the top of the tank into the oil, and when the desired level is reached, a string or chain attached to a trigger holding the bottom open is pulled and the bottom returned to the closed position. By this operation a column of oil, etc., is enclosed and may be withdrawn for inspection. The quantity of water and B. S. may be determined from the sample. The B. S. or water line in the tank will be indicated by means of the graduations on the thief. The oil level is usually obtained by a gauge stick.

All tanks are measured for capacity at all depths. The capacities are set down in tables corresponding to feet and inches in height. Knowing the capacity of each tank, which is numbered, and the B. S. or water level as obtained by the thief, a deduction of the volume equivalent to this level from the volume corresponding to the oil level will give the quantity of oil. As oil expands and contracts with increase and decrease of temperature, it is necessary to note the temperature and allow for this. The standard temperature is 60 degrees Fahrenheit.

Most fresh oil contains gas which is lost to a great extent in the course of transporting the oil. There is some loss through evaporation and leaking pipe lines. A tank may leak. Loss of gas and evaporation affect the gravity. All of these conditions must be known and controlled through the inspection. This inspection is hourly for the pipe lines, daily for the lease tanks and weekly or monthly for inventory purposes.

The water and B. S. tests in the field are frequently checked by means of laboratory tests of samples sent in for that purpose. Any change in gravity, which is reflected in gasoline content, is detected by the laboratory examination. Gasoline is found by distillation; large quantities of water and B. S. by the centrifuge; small quantities of water by distillation.

A deduction of from two to three per cent is made in pipe line deliveries to allow for evaporation and B. S. and water.

GLYCOL AND GLYCERIN

The reports that the Standard Oil Co. of New Jersey has arranged for the purchase of the Bergius patents covering the manufacture of synthetic gasoline from coal mention an exchange of glycol patents, and that this substance may be used in the place of glycerin; will you explain what glycol is?—W. E. C.

No production of gasoline from coal is regarded as probable in this country any time soon, chiefly because synthetic gasoline cannot be produced at a cost to compete with gasoline produced from petroleum.

Regarding the product, glycol, patents on which are owned by the Standard Oil Co. of New Jersey, and for which the German Dye Trust has been given some rights, this is a product of crude oil and chemicals which is supposed to have certain advantages over glycerin. It was discovered by chemists who were trying to find use for residuums left after cracking crude oil from gasoline. Like synthetic gasoline, it costs more than glycerin at present.

The name glycol may be given to a number of hydrocarbons having the general formula $C_nH_{2n}(OH)_2$, the simplest one being ethylene glycol. This compound is closely related to ethyl alcohol, and is a thick, colorless liquid with a mildly sweet taste; it boi's at 387.5 Fahrenheit; is soluble in water and alcohol in all proportions, but only sparingly soluble in ether. The formula for ethylene glycol is $C_2H_4(OH)_2$.

Glycerin, also called glycerol, is similar and contains one more hydrocarbon group together with an additional OH group, or $C_3H_5(OH)_3$. Glycerin is a colorless substance and when pure is a crystalline solid at 63 Fahrenheit, but very slight traces of water cause it to liquefy and it is usually seen as a thick syrup. It boils at 554 Fahrenheit. It mixes with water and alcohol, but is insoluble in ether. It has a distinctly sweet taste.

Glycerin, like glycerol, yields a variety of oxidation products according to the condition under which it is treated. Glycerin is extensively used in the preparation of nitroglycerin and toilet preparations, also as an antifreeze liquid.

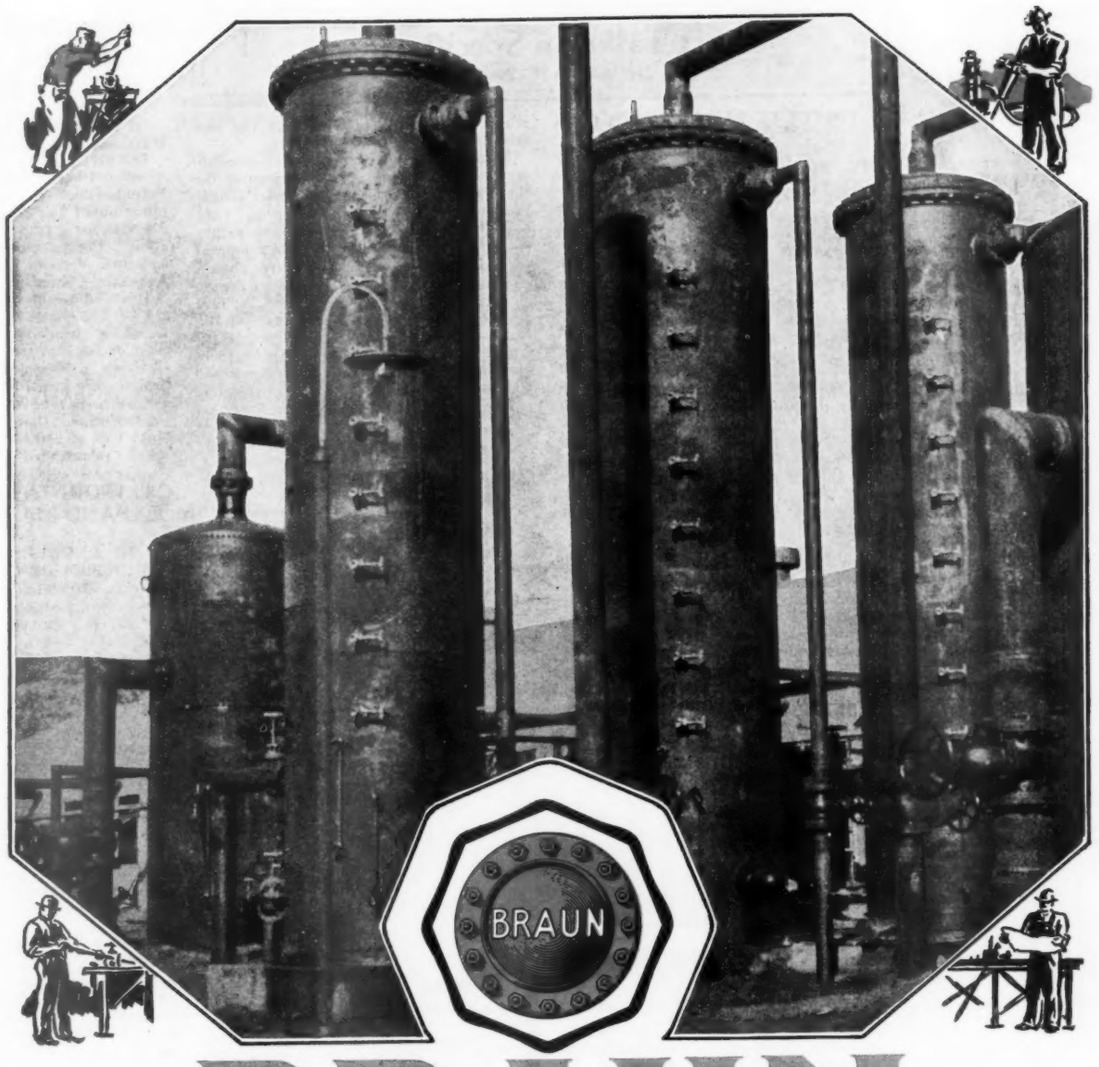
AMMONIA FOR NEUTRALIZING CORROSIVE SUBSTANCES

In what form, gas or liquid, and how is ammonia introduced into the oil for the purpose of checking the action of corrosive substances when running crude through the stills? Is it possible to use ammonia in pipe stills? How much should be used? S. D.

The concentrated aqua ammonia or the anhydrous gas may be used; which form is used is largely a matter of convenience and choice. There is but little difference in the cost, although in some sections the aqua ammonia is the cheaper. We know of no special complications involved with the introduction of ammonia into oil which is to be run through pipe stills; in fact, it appears that its use in pipe stills is simpler and easier to control than its use in a battery of shell stills.

The liquid ammonia or the gas may be introduced into the system with the crude oil. The liquid may be handled through a small pump into the main charging line, and consequently passes through the exchangers, into the stills, through the towers and condensing system. As the ammonia gas is under pressure it may be put into the charge at any convenient place on the supply.

The quantity of ammonia is calculated on actual ammonia; that is, NH_3, and this should vary with different crudes. Some plants state that six to eight pounds for each 1,000 bbls. are used, while other refineries and with other crudes require 25 pounds to correct for both hydrogen sulphide and acid. Many petroleums do not appear to produce any acid until nearly all of the gasoline fraction has been separated, but the hydrogen sulphide oils usually show the presence of acid throughout the distillation. Corrosive action is indicated when the condensed water at the lookboxes, or the separators, contain iron, copper and acid. The matter of the quantity of ammonia to be used should be determined by chemical examination.



BRAUN
BUBBLE TOWERS

Flexibility----performance equally good over a range of from 10% to 100% of rated capacity----is characteristic of BRAUN Bubble Stills, Absorbers, and Rectifiers. At much higher, and even lower, rates, the change in efficiency is scarcely appreciable.

C·F·BRAUN & CO. *Manufacturing Mechanical* ENGINEERS
ALHAMBRA CALIFORNIA
TULSA DALLAS NEW YORK

Of Interest to Sales Departments

Gasoline Consumption 11.4 Per Cent Larger In Thirty-Six States

Gasoline consumption in 36 states during June totaled 611,937,000 gallons, an increase of 62,712,000 gallons or 11.4 per cent over the 549,225,000 gallons consumed in June, 1926. The June, 1927, increase in consumption over May, 1927, was 10.4 per cent.

For the six-month period ending July 1 of this year the gasoline consumed in the 36 states totaled 2,964,156,000 gallons, an increase of 258,087,000 gallons or 9.5 per cent over the 2,706,069,000 gallons consumed the first six months of last year.

The figures as shown in the following table gives the quantity of gasoline sold or offered for sale as reported under the various laws and were compiled by the American Petroleum Institute. In some cases they are gross figures before deductions allowed for small quantities of gasoline reshipped or sold for other than taxable uses, the tax upon which if paid is subsequently refunded. All figures are subject to revision:

Gasoline Consumption by States, June, 1927

	Month of—	
	June, 1927	June, 1926
Alabama	12,369,000	10,682,000
Arizona	3,175,000	2,869,000
Arkansas	8,745,000	8,409,000
Delaware	3,016,000	1,776,000
District of Columbia	5,495,000	4,573,000
Florida	20,677,000	22,234,000
Georgia	15,143,000	13,639,000
Idaho	4,194,000	4,015,000
Indiana	31,643,000	28,616,000
Iowa	23,764,000	23,761,000
Kansas	28,024,000	23,819,000
Kentucky	10,743,000	9,678,000
Louisiana	11,703,000	11,242,000
Maine	8,767,000	7,420,000
Michigan	58,536,000	51,197,000
Minnesota	29,754,000	25,943,000
Mississippi	9,321,000	8,773,000
Missouri	25,937,000	21,042,000
Nebraska	14,709,000	13,866,000
Nevada	1,272,000	1,088,000
New Hampshire	4,807,000	4,295,000
New Mexico	2,763,000	2,071,000
North Carolina	20,302,000	17,951,000
North Dakota	8,884,000	6,585,000
Ohio	66,994,000	64,639,000
Oklahoma	23,097,000	18,518,000
Oregon	12,130,000	11,110,000
Rhode Island	5,215,000	5,237,000
South Carolina	8,320,000	7,396,000
South Dakota	8,895,000	6,732,000
Texas	50,100,000	45,011,000
Utah	4,064,000	3,610,000
Virginia	15,070,000	12,961,000
Washington	18,923,000	17,560,000
Wisconsin	32,615,000	28,704,000
Wyoming	2,771,000	2,203,000
Total	611,937,000	549,225,000
Daily average	20,398,000	18,308,000
Increase over prev. yr:		
Amount	62,712,000	
Percentage	11.4%	

	Quarter ended—	
	June 30, 1927	June 30, 1926
California	270,333,000	228,400,000
Montana	11,716,000	12,609,000
Tennessee	35,183,000	31,238,000

ARGENTINA SELLING PRODUCTS

Contrary to the early system of operation, when most of the crude oil from the government-owned fields was sold for use as fuel without distillation, the Argentine Government is now distilling the petroleum and undertaking sale of products and by-products, the market for the latter being still uncertain. The purchasers of crude and fuel oil are large industries with large requirements, but the consumers of gasoline and kerosene are generally private individuals who need the former for automobiles and the latter for illumination purposes. It is for the purpose of reaching the small buyers that the administration has signed a concession contract for the sale of gasoline and kerosene throughout the country. Argentina has been divided into nine zones for the purpose of distribution and agencies and branch agencies established to the number of 673. Most of the system has been established during the past year.

Short Talks on Specifications

By William T. Ziegenhain

VISCOSITY OF LUBRICATING OILS AND RESIDUAL OILS

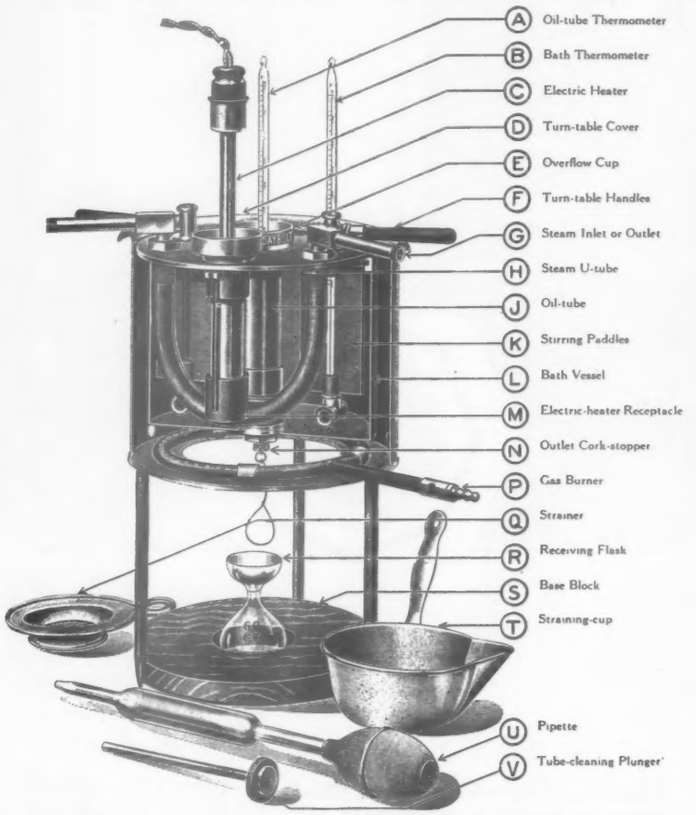
The Saybolt standard universal viscosimeter has been generally adopted by the oil industry as the means of determining the viscosity of lubricating oils and the Saybolt Furol viscosimeter for heavy residual oils such as fuel oils and others containing traces of solid matter. The two machines are identical with the exception of the outlet in the oil tubes. The orifice in the Furol tube is 10 times as large as that of the standard tube so the Furol readings are about one-tenth those of the standard when testing the same oil at the same temperature.

The temperature of the oil effects its viscosity and standard temperatures are observed but some times test results are called for based on other than the standard temperatures. The viscosity of the lighter lubricating oils is usually determined at 100 degrees Fahrenheit and the heavier oils at 210 degrees Fahrenheit. The temperatures at which the Furol viscosity is usually run are 77 degrees and 122 degrees Fahrenheit. At times the salesman is asked to quote on an oil whose viscosity specification is set at some other temperature than the standard and a rough estimate may be made if the viscosity is known at the standard temperature providing there is not too great a difference in the two temperatures. But unless one is thoroughly experienced in the effect and is familiar with the oil, it is best to have the test made at the stated temperature.

There are several sources of possible error in estimating this information for the viscosities of oils made from crudes produced in the various fields do not vary the same with the same temperature change. One degree difference in temperature at relatively low temperatures changes the viscosity more than a one-degree change at higher temperatures. In fact all lubricating oils tend to approach the same viscosity as the temperature is increased and theoretically a sufficiently high temperature could be chosen at which all would have the same viscosity.

The viscosimeter is made entirely of metal and a general idea of its construction can be gained from the accompanying picture. The standard oil tube J is fitted at the top with an overflow cup E and the tube is surrounded by a bath of oil or water. At the bottom of the tube is a small orifice through which the oil to be tested flows into the receiving flask R. The capacity of the flask up to the ring is 60 cubic centimeters. The lower end of the outlet tube is enclosed

(Continued on Page 172)



NEW USE FOR KEROSENE

Standard kerosene lanterns are used by the police of Providence, R. I., for the lighting of their smaller street traffic signs. The colorless globe, the red globe and the green—all are used. Low upkeep, coupled with the chance offered for inexpensive changes when the main lanes of traffic shift, is the main argument in their favor, according to D. K. Finley, manager of the Providence Safety Council.

Independent Oil Secures Reversal In Red Hat Case

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 20.—In its second battle before the United States Patent Office in opposition to the application of the Independent Oil Men of America for a trade mark, "Red Hat Gasoline," the Standard Oil Company has lost by a decision rendered by the First Assistant Commissioner of Patents.

It will be remembered that the Standard Oil Co. contended that this "Red Hat Gasoline" trade-mark was an infringement on its own trade mark, "Red Crown Gasoline." When this infringement proceeding was heard before the examiner he decided in favor of the Standard Oil's contention to the effect that the "Red Hat" was so similar to the "Red Crown"

(Continued on Page 170)

CALIFORNIA COMPANIES EXPAND MARKET OUTLETS

LOS ANGELES, Calif., Aug. 20.—The Richfield Oil Co. recently completed additional installations at its Rioco refinery near Los Angeles and now has a straight run capacity of around 40,000 bbls. daily and a cracking capacity of approximately 10,000 bbls. per day. The company's sales policy has been broadened to include a comprehensive export trade and increased distribution in the Pacific Northwest, including Washington and Oregon. This will provide an outlet for surplus products and make the company less susceptible to local price changes. The company's gasoline sales have shown a very substantial increase during the past several years reaching a peak of 34,963,678 gallons in the second quarter of this year, compared with 33,402,000 gallons in the second quarter of last year and 31,609,026 gallons in the first quarter of 1927.

Another important expansion program involves the Pan American Western and Petroleum Securities, the latter being a holding company of the Doheny interests. This move contemplates the purchase of several tankers for movement out of Los Angeles Harbor to both domestic and foreign ports. This will provide the Pan American with an additional outlet for both crude and refined oils and tend to render this concern less susceptible to local conditions. Negotiations are under way for the purchase of at least two tankers but it is logical to assume that this is only a nucleus as it is not customary for these two companies to undertake anything except on a large comprehensive scale.

C. W. Smith, vice president and director of transportation for the Pan American and Fred Bodin, superintending engineer at New York for the Norwegian-American Lines of Oslo, Norway, have been in consultation for some time and if negotiations are brought to a successful climax, the Pan American will assume possession of the Norwegian tanker Foldenfjord, now lying at anchor in Los Angeles Harbor. This vessel, a white boat, which was built at the Sun Shipbuilding Co. at Chester, Pa., in 1921, has a capacity of 75,000 bbls. The basis of negotiations under way have not been announced but, with good tankers bringing around $75 or more per deadweight ton, something like $750,000 is involved. While commenting on this transaction it might not be amiss to call attention to the fact that the California Petroleum several months ago acquired the tankers Agwismith, Cape Ann, Cape Cod and Cape Henlopen, renaming them the Helen Vinmont, Helen Almsted, Emma A. Coppage and Winifred O'Donnell.

Bull's-Eye Action!

Special Mid-Continent Bright Stock and Neutrals

The smoothness and unerring precision about Pure Oil service suggests expert skill and adequate facilities—from well to consumer.

Having Pure Oil as your source of supply means having petroleum products which are strictly to specification and available the instant they are required,—service on the dot.

Phone, write or wire.

THE PURE OIL COMPANY

U. S. A.

Sales Offices

CHICAGO
NEW YORK
PHILADELPHIA
PITTSBURGH
COLUMBUS, O.
MINNEAPOLIS
TULSA, OKLA.
CHARLESTON, W. VA.
ATLANTA, GA.
BEAUMONT, TEX.
PENSACOLA, FLA.

Refineries

MUSKOGEE, OKLA.
ARDMORE, OKLA.
SMITH'S BLUFFS, TEX.

COMMANDS A PREMIUM PRICE — CABIN CREEK — OVER ALL OTHER CRUDES

HEATH, OHIO
MARCUS HOOK, PA.
CABIN CREEK JCT., W. VA.

Computing Gas Volume by Slide Scale

New Device for Use With Orifice Meter Charts Found To Be Accurate and Also Time Saver

By E. J. Jones*
General Petroleum Corp.

The slide rule used in the computation of gas volumes as referred to in this paper is a specially designed slide rule built more or less to order, based on two or three different barometric pressure bases. The rules that we have are calibrated on a static scale of 14.6 pounds.

The rule is 45 inches long and 6½ inches wide and built very similar to the ordinary slide rule except that the scales and graduations of the scales are radically different. The rule is built with a mahogany back securely glued and fastened together with screws. The front part of the rule is of well seasoned cherry and is covered with french ivory. The scales are cut deep into the ivory and filled with color. The lines on the scales are numbered plainly and uniformly so that there is practically no confusion in making the readings. The rule is supported on two triangular blocks which give it a convenient angle for use on a desk. Ample room is allowed for sliding the charts under the rule while they are being handled.

The bottom scale on the rule is suitably graduated and shows the coefficient. The corresponding scale, that is, the one on the lower side of the slide, is colored purple and is the static scale. The scale on the upper side of the slide is colored red and shows the differential, while the scale at the top of the rule is colored black, and from which the volume is read.

The rule is equipped with two hairline indicators suitable for the purpose for which they are used. There is also a magnifying hairline indicator that may be used on the rule if desired. It is claimed that this magnifying hairline indicator doubles the size of the scales, giving the rule an effective length of 90 inches.

Method Accurate

We believe the slide rule is a very accurate method of computing gas volumes from orifice meter charts and we also believe that it is more accurate than the other factors that enter into the measurement of gas through an orifice meter. There are so many factors to which careful consideration must be given in order to insure accurate measurement of gas volumes and the proper recording of same on the orifice meter charts, that in our opinion it is of practically no consequence as to whether the slide rule will compute the gas volume correct to three or four decimal places. As a matter of fact, decimal places are rarely used. The coefficient itself is computed from an equation, using a valve taken from an empirical curve, and is not accurate to this degree. The accuracy of the slide rule, in our opinion, is due to the fact that any observed reading on the chart may be set on the slide rule to any fraction of an inch differential, pound pressure or inch vacuum. It is not necessary to jump to the next even figure. This is especially important when dealing with low differentials and low pressures.

How To Use

In order to give an example of the comparative accuracy of the slide rule as compared with the ordinary calculating machine, we will assume that we have a volume to compute from a chart where it has been established that the coefficient is 2,954.183, the observed reading of the differential being 10 inches and the static pressure 20 pounds. The extension for 10 inches differential at 20 pounds static pressure from the pressure extension book is 18.547. Using these figures, the calculating machine shows the gas volume to be 54,791.232101 cubic feet. By using the slide rule, we would find that the gas passed would read 54,800 cubic feet.

*Paper read at meeting of California Natural Gasoline Association.

The result on the slide rule is thus found to be nearly 10 cubic feet high in this instance, but supposing that the chart actually read 20.5 pounds static pressure, the result on the slide rule would then read 55,200 cubic feet, but using the pressure extension method, it would probably be computed as though it read an even 20 pounds and for the latter reading the extension method is seen to give a result that is 800 cubic feet low in this instance. It is common practice in reading charts with the use of the ordinary calculating machine for the operator to give and take, that is, one chart would be read a little high and the next one low, for example, if there were two charts showing a static pressure of 20.5 pounds, the probabilities are that one pressure extension used would correspond to 21 pounds and the other to 20 pounds.

The point is that the operator is compensating for errors in hundreds of cubic feet of gas and having to remember to do it, while the slide rule is self-compensating for tens of cubic feet, thus it will be seen that the slide rule is accurate to one decimal more than the extension method and for the vacuum readings the error due to jumping to the next even figure is even greater.

First Step

The first step in computing a volume of gas from an orifice meter chart using the slide rule is to determine the average of the static pressure and differential, then obtain the proper coefficient which would be set on the lower scale of the slide rule under the hairline indicator. For example, if the coefficient happened to be 624 for a pressure meter, the hairline indicator would be set on the left hand side of the rule four-fifths of the distance between 6.2 and the next line on the scale. Next, set the static pressure, which we will assume to be 10 pounds, on the line numbered 10 for static pressure. Next, set the hairline indicator for the differential, which we will assume was 8 inches, on the line numbered 8 on the differential or red scale. The gas volume may then be read from the top scale of the slide rule directly under the hairline and opposite the differential of 8 inches. The volume passed in this instance would be found to be 8,750 cubic feet, which would be read 9,000 cubic feet. This same method is followed for either the hourly or 24-hour computations of a gas volume. If the volume is to be read by the hour, the hourly coefficient would be used and if for a 24-hour period, of course, the 24-hour coefficient would be used.

Gas Volume Reading

The reading of the volume of gas passed must be made in accordance with the tables which appear on either end of the rule. The gas for any setting on the slide rule will be read on the direct scale to three or four significant figures. In order to handle the results of using small or large coefficients, reference must be made to these tables. The O's or the decimal points correspond to the number of figures before the decimal point in the coefficient. For example, when the coefficient used above (624) is set on the left of 10 on the bottom scale, the table shows three O's (thousands) and if the resulting reading on the upper scale were found to be 8.75, the result would be 8.75 M cubic feet. If the reading were 53.8, the result would be 53.8 M cubic feet and read 54,000 cubic feet. If, however, the coefficient set were 6,240, we would refer to the table which would show four O's (ten thousands), then the two readings would be 87.5 M cubic feet and 538 M cubic feet.

It will be noted that if the same coefficients were set on the right of 10 on the bottom scale the reading on the upper scale would be 10 times as large but the unit of reading is one-tenth as large. We have found that an operator with a little practice will be able to make use of these tables readily and becomes very familiar with them as coefficients of three or four figures before the decimal point are most commonly used. For setting to the right of 10 it is easy to remember that a coefficient such as 7,480 will be read in ten thousands, the four figures corresponding to the four O's in ten thousand.

Advantages of Slide Rule

In order to illustrate by comparison the superiority of the slide rule over the commonly used methods of computing gas volumes from orifice meter charts, we ran a series of tests using 62 charts for the purpose of making these tests. The charts were taken from orifice meters on gas lines through which the volume of gas for a 24-hour period varied from as low as 10,000 cubic feet to as high as 10,000,000 cubic feet. We turned the charts over to an experienced chart reader with instructions to compute the volumes by the hourly method, using the pressure extensions and making the computations on a well-known calculating machine. The time required to compute the volume by this method was 9½ hours or at the rate of slightly more than 6½ charts per hour. The 9½ hours were taken up as follows:

	Hrs.	Min.
Averaging and tabulating pressure and differential	3	2
Tabulating hourly coefficient	..	10
Tabulating pressure extensions and totaling for 24 hour period	6	..
Multiplying extensions by hourly coefficients	..	18
Total time consumed	9	30

We next turned the same charts over to another experienced chart reader with instructions to compute the volumes passed hourly and to total same for the 24 hours, making the computations by slide rule and adding machine. The time required to do this was 4 hours or at the rate of 15½ charts per hour. The 4 hours were taken up as follows:

	Hrs.	Min.
Tabulating coefficients on back of charts	..	13
Computing volumes with slide rule	3	21
Adding hourly volumes on each chart for 24-hour period	..	26
Total time consumed	4	0

A recheck of the charts used in these tests revealed that the volumes as computed by each method varied less than one-tenth of 1 per cent.

Saves Time

We have found that the slide rule saves us more time when it is necessary to compute volumes of gas passed hourly and total for the 24 hours, as has been shown in the comparison above. The slide rule used for this purpose is almost two and one-half times as fast as the calculating machine and pressure extension method.

We made another test on another group of 62 charts, the charts having a comparatively smooth, even static pressure and differential. We turned the charts over to an experienced chart reader with instructions to compute the volume of gas passed by averaging the static pressure and differential for the 24-hour period, using the pressure extension book and calculating machine for the purpose. The time required to compute the volumes by this method was 3 hours and 35 minutes, or at the rate of 17 charts per hour. The time consumed was divided as follows:

	Hrs.	Min.
Averaging static pressure and differential with calculating machine	2	7
Tabulating extensions from pressure extension book	1	17
Computing volume using 24-hour coefficient	..	11
Total time consumed	3	35

The same charts were then turned over to another experienced chart reader with instructions to compute the volume by averaging the static pressure and differential for the 24-hour period, using the slide rule for the computation of the volume. The time required to compute the volume of gas passed by this method was 2 hours and 28 minutes, or at the rate of 24 charts per hour. The time consumed was divided as follows:

	Hrs.	Min.
Averaging static pressure and differential with calculating machine	2	7
Tabulating 24-hour coefficient on chart	..	4
Computing volume on slide rule	..	17
Total time consumed	2	28

It will be seen from this comparison that gas volumes may be computed one-third faster on the slide rule than on the well-known calculating machine. It will also be noted that the saving of time is occasioned by not being required to look up pressure extensions when using the slide rule.

Test on 12 Charts

In order to satisfy ourselves as to the merits of the common slide rule for the computation of gas volumes from orifice meter charts, we ran a test on just 12 charts this morning. This was done rapidly for the reason that it was necessary to complete the paper today. Therefore, the results from this test are not as complete as we would like to have had them. However, we think beyond a question of doubt that the slide rule referred to elsewhere in this paper is far superior to the common slide rule for the purpose of computing gas volumes.

We had one of the experienced chart readers check the volume on 12 charts, using the 24-hour method. You will understand that these charts had already been figured. The coefficient was on the back of the chart and it was only necessary for the operator to set the coefficient, static pressure and differential and check the volume which was shown on the chart. The time consumed by the operator in checking these 12 charts was exactly 1½ minutes which I am satisfied you will admit is rather rapid work. To check the volume on the 12 charts by use of the ordinary slide rule required 6½ minutes of an operator's time. The operator in this instance was not a chart reader but was experienced on the common slide rule. Of course, the advantages were in favor of the chart reader since the operator of the common slide rule found it necessary to refer to the pressure extension book before making the computations.

It will be seen from the above that even if this test is not complete, nevertheless it shows that the slide rule is several times faster than the ordinary slide rule for computing gas volumes from orifice meter charts. However, we believe that the ordinary slide rule in the hands of an experienced operator is very accurate for computing gas volumes.

In conclusion, I wish to say that material for the greater part of this paper was furnished by several of my coworkers to whom I wish to extend my appreciation.

NEW CRACKING PLANT

CHATHAM, Ontario, Aug. 20.—The Beaver Refining Co. at Coutts, Alberta, has completed the installation of a Foster heating system cracking plant. This is the fourth system of this kind installed, and the first in Canada. The process eliminates the shell stills and puts the crude directly through the heater.

Lasting Protection *Since* '81

In 1881 . . . when The Arco Company first began making paints and protective products . . . a high standard of manufacturing was decided on.

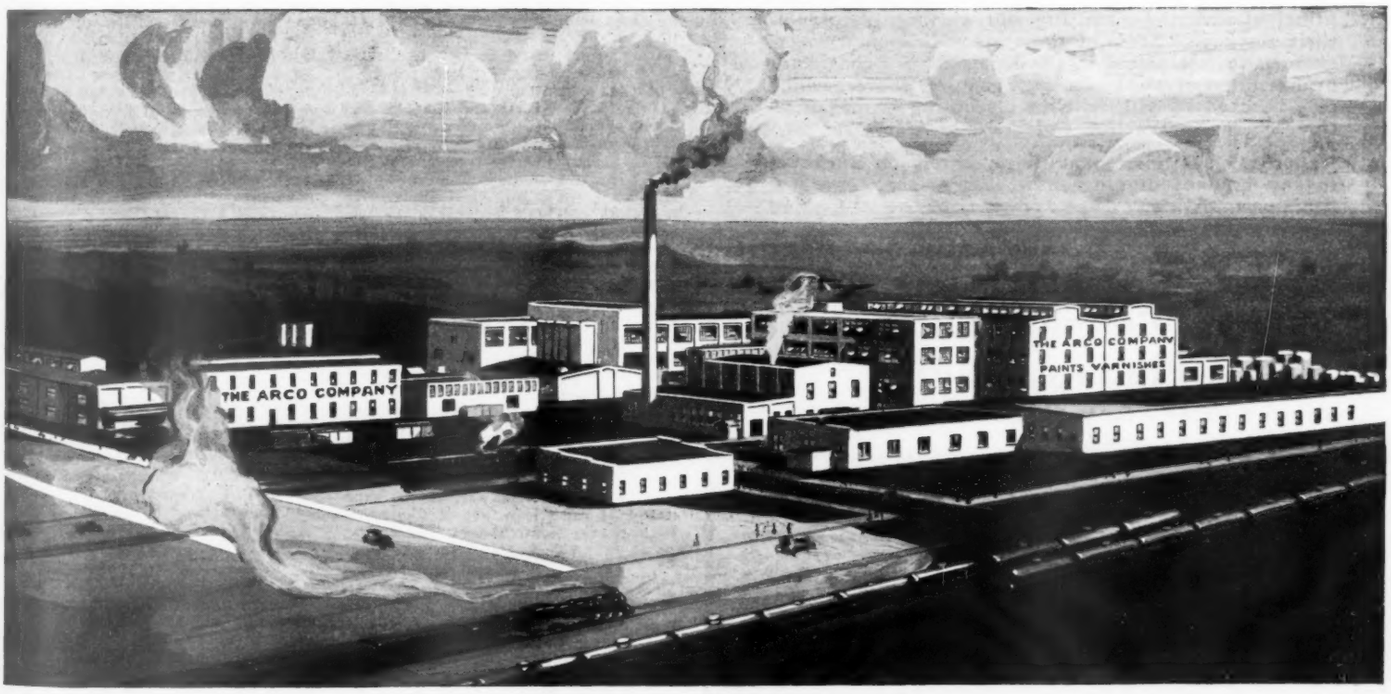
Since that time, the quality of Arco products has never varied . . . the standard has never been lowered.

During these 46 years of careful formulation and manufacturing, Arco has perfected 6,819 different paints and protective finishes. Many of them were formulated especially to meet the severe conditions found in the oil and gas industries. These products will enable you to conquer rust *positively* and *permanently.*

Before you refinish your tank cars, tanks, machinery, pumps and other equipment . . . call on our technical department for help. *Why not do it today?* Then you will be sure to have this information handy when you need it.

THE ARCO COMPANY · CLEVELAND, OHIO

PAINTS · VARNISHES · ENAMELS · LACQUERS (85)



ARCO

PAINTS · VARNISHES · ENAMELS · LACQUERS

"Superior Performance in Oil Field Requirements"

Kelly-Dempsey & Company, prominent Pipe Line Welding Contractors of Tulsa, needed a new trench excavator.

Exacting in their demands, they bought the Buckeye shown digging trench for 16-inch pipe line—welded construction.

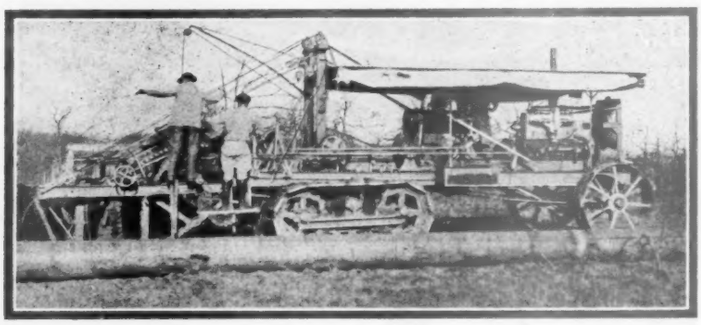
Asked why they chose it in preference to competitive equipment, Vice-President O. E. Dempsey enthusiastically replied—*"Superior performance in oil field requirements."*

Mr. Dempsey continued, detailing what he considers principal advantages and superior working features of their Buckeye. Some of these are: "Economy, speed, uniformity. It places in the hands of the contractor or user the equivalent of a large gang of laborers which may be used at will, without disrupting an organization. * * * Traction and grading."

Experienced oil men *know* they can rely on Buckeyes in any kind of digging—now *just as they have for years past.* Ask any owner, or send for the interesting booklet, "Pipe-Line Construction Records."

The Buckeye Traction Ditcher Co.
Findlay, Ohio

There's a Buckeye Sales and Service Office Near You



Buckeye TRENCH EXCAVATORS FOR OVER 30 YEARS

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE

Carson County

Magnolia Petroleum Co.'s No. 5 fee, No. 244, 330 feet north and east of SW cor. of NE Section 91, Block 4, I. & G. N. The Texas Company's No. 1 J. C. McConnell-B, 495 feet south and 330 feet west of NE cor. of the north 50 acres of NW Section 185, Block 3, I. & G. N.

Dallam County

Marland Oil Co.'s No. 1 A. M. James, at the center of SW W half Section 21, S. H. McElreath Survey.

Gray County

Amagray Oil Co.'s No. 1 A. Chapman, 990 feet south and 330 feet east of NW cor. SW Section 9, Block 26, H. & G. N. Gibson Oil Corp.'s No. 2 J. B. Bowers, 330 feet north and 990 feet west of SE cor. of the nor h 120 acres of the east half of Section 92, Block B-2, H. & G. N.

NORTH CENTRAL AND WEST TEXAS

Archer County

Bridwell & Heydrick's No. 2 J. L. Perkins and others' (W. F. Woodrum), 150 feet north and west of SE cor. of Lot 109, Woodrum Subdivision, Terebio Losoya Survey, A-257.

Brown County

Carter Oil Co.'s No. 3 Hamp Byler, 150 feet north and 1,060 feet west of SE cor. of east 40 acres of the north 80 acres of H. Byler 260-acre tract out of T. & N. O. Survey No. 43, A-914. Humble Oil & Refining Co.'s No. 2 Hamp Byler, 150 feet south and 823 feet west of NE cor. of the south 80 acres of the north 160 acres of H. Byler tract out of T. & N. O. Survey No. 43, A-914. G. P. Mitcham's No. 1 C. N. Keeler, 720 feet south and 450 feet west of NE cor. of the C. N. Keeler 160-acre tract out of Jose Padilla Survey No. 646, A-739. Prairie Oil & Gas Co.'s No. 3 J. K. Gafford-B, 150 feet south and east of NW cor. of the west 57 acres of the J. K. Gafford 107-acre tract out of the William Miller Survey No. 149. Roxana Petroleum Corp.'s No. 2 M. L. Smith, 150 feet north and 474 feet east of the SW cor. of the south 60 acres of the west 120 acres of the east 140 acres of the M. L. Smith 340-acre tract out of Section 1, S. A. & M. G. Survey, A-849.

Roxana Petroleum Corp.'s No. 3 M. L. Smith, 150 feet north and 798 feet east of SW cor. of the south 60 acres of west 120 acres of the east 140 acres of the M. L. Smith 340-actre tract out of Section 1, S. A. & M. G. Survey, A-849. O. H. Shoup, Jr.'s, No. 31 J. Byler, 475 feet south and 1,002 feet east of the NW cor. of the J. Byler 112-acre tract out of the T. & N. O. Survey No. 43, A-914. Simms Oil Co.'s No. 1 H. M. Trueheart, 150 feet north and east of SW cor. of the northeast 80 acres of the M. B. Lamar Survey No. 638, A-603. Terrell & Morrissey's No. 2 S. P. Rumph and others, 150 feet north and west of SE cor. of the west half of T. J. Swindle Survey, A-1,171. Wentz Oil Corp.'s No. 30 J. W. Shore, 1,560 feet south and 1,090 feet west of the NE cor. of their 240-acre lease out of the Charles S. Betts Survey No. 625, A-71. Same company's No. 31 J. W. Shore, 1,710 feet south and 1,410 feet west of the same corner of same lease out of Charles S. Betts Survey No. 625, A-71.

Callahan County

L. Adams and others' No. 1 Hugh Moore, 150 feet south and west of NE cor. of SW of NE of Section 9, Block 6, S. P. R. R. Survey.

Cooke County

R. R. Gray and others' No. 3 Public Park, 150 feet south and east of the NW cor. of Block 59, town of Muenster.

Crockett County

George A. Henshaw's No. 1 Noelke & Murphy, 660 feet south and east of the NW cor. Section 10, Block PP, A-5,148, T. C. R. R.

Howard County

Magnolia Petroleum Co.'s No. 5 Sloan Chalk, 2,310 feet south and 2,260 feet east of NW cor. of Section 114, Block 29, W. & N. W. Same company's No. 1 John Roberts, 330 feet north and 2,310 feet east of SW cor. of Section 136, Block 29, W. & N. W. Marland Oil Co.'s No. 1 Guitar Trust Estate-A, 1,320 feet north and west of SE cor. of Section 14, Bauer & Cockrell Survey.

Jack County

Hawkins & Hester's No. 1 J. Barry, Jr., 150 feet north and 510 feet east of SW cor. of Section 2,642, T. E. & L. L. M. Lamar and others' No. 1 J. R. Moore, 150 feet north and east of SW cor. of the J. R. Moore 250-acre tract out of W. W. Brown Survey, A-2,004, and the W. Berryman Survey, A 40. H. A. Rippin's No. 1 Mrs. M. D. Snedeker, 6,100 feet north and 1,125 feet west of the SE cor. of the J. Robbins Survey, A-490, being 150 feet north and east of the SW cor. of the north half of Lot No. 8.

Montague County

Humble Oil & Refining Co.'s No. 1 Mrs. A. B. Hinton, 3,000 feet south and 1,780 feet east of NW cor. of the Alex Coats Survey, A-129, being 150 feet south and west of the NE corner of their 50-acre lease. H. C. Dickey and others' No. 1 Mrs. T. B. Ditto, 620 feet northwest of the southeast line and 620 feet northeast of the southwest line of Section 67, Titus County School Lands. Gulf Production Co.'s No. 1 S. F. Loy and others, 150 feet south and west of the NE cor. of their 40-acre lease out of the William Donoho Survey, A-173.

Pecos County

Mid-Kansas Oil & Gas Co.'s No. 4 I. G. Yates-B, 250 feet south and 1,273 feet east of NW cor. of Section 61, Block 1, I. & G. N. Survey. Same company's No. 1 I. G. Yates-D, 1,320 feet south and west of the most northerly NE cor. of Section 31, Block 194, G. C. & S. F. Survey. George A. Henshaw's No. 1 Sweatt & Hinyard, at the center of the SW of Section 29, Block 144, T. & St. L. R. R. Survey.

Upton County

J. M. Hickey's No. 1 W. I. Gormley, 1,650 feet northeast of the southwest line and 1,650 feet northwest of the southeast line of Section 7, Block 36, H. & T. C. Survey. Humble Oil & Refining Co.'s No. 6 R. Ricker, 2,610 feet southwest of the northeast line and 5,930 feet southeast of the northwest line of M. S. Denton Survey No. 5, A-127. Tidal Oil Co.'s No. 2 A. S. Burleson, 225 feet south and 330 feet east of the NW cor. of the north 30 acres of the east 120 acres of the south 240 acres of John Nidever Survey No. 2, A-749.

Wichita County

Mrs. R. A. Lanning and others' No. 3 S. M. McCarty, Lease No. 2, 600 feet north and 150 feet west of SE cor. of the west 40 acres of the east 80 acres of the north 100 acres of the S. M. McCarty tract out of the Sam O. Fowler Survey No. 78.

Wilbarger County

Consolidated Oil Co. and J. S. Cosden's No. 9 W. T. Waggoner, 150 feet north and east of SW cor. of the north half of the SE of the NW of Section 57, Block 4, H. & T. C. Waggoner Refining Co.'s No. 2 W. T. Waggoner-C, 150 feet south and 450 feet west of NE cor. of the SW of the NW of Section 44, Block 4, H. & T. C.

Winkler County

Landreth Production Corp.'s No. 1 Grisham-Hunter Corp. and others' 2,310 feet south and 330 feet east of the NW cor. of Section 45, Block 26, School Land. Southern Crude Oil Purchasing Co.'s No. 3 Grisham-Hunter-A, Tract 68, 2,310 feet south and 330 feet east of NW cor. of Section 35, Block B-5, School Land.

Corrected Locations

Brown County—Ross Drilling Co.'s No. 1 S. F. Miller, formerly their No. 1 Southern Methodist University, 673 feet north and 2,465 feet west of the SE cor. of T. J. Swindel Survey, A-1,171, being 143 feet north and 267 feet east of the SW cor. of the north 30 acres of the west

At Last

A Perfect Sucker Rod

The Buffalo Sucker Rod is designed to overcome all possible difficulties encountered in the use of this vitally necessary product.

Made from special steel rolled in our own Plant, treated to secure the maximum tensile strength and at the same time show a high elastic limit, forged by experts, it presents an ideal fixture which will be found perfectly satisfactory for the needs of all fields.

Try a car and be happy.

Don't forget our re-enforced Pull Rods with drop forged clamps. They satisfy.

BUFFALO BOLT COMPANY

NORTH TONAWANDA, N. Y.

Sales Offices:

Pioneer Trust Bldg.
Kansas City, Mo.

General Motors Bldg.
Detroit, Mich.

Monadnock Bldg.
Chicago, Ill.

TIFOCO

made

JAQUES FORGED STEEL DRILLING CONNECTIONS

—double end—

The vast improvement over the common auger stem represented by the Jaques Drilling Connection is reflected in records made in every field, not only in correcting and PREVENTING crooked holes, but also in the additional advantages which place them in a class by themselves:

1. Prevents crooked holes
2. Lessens jar breakage
3. Cleans hole for bailer
4. Allows more than one screw before running bailer
5. Prevents cutting of drilling cable
6. Eliminates possibility of cave-ins
7. Undue wall friction eliminated
8. Reduces whipping of drill cable
9. Tools are always in center of hole for fishing
10. Gives the tools a rotary motion, and prevents key-seating.

Not many operators are willing to pass up these decided advantages for the sake of a little more money than ordinary stems cost, and those who have not yet experienced the satisfaction of using Winged Drilling Connections are being won over daily. Jaques Forged Steel Drilling Connections are made from the solid under 2000-ton hydraulic forging press, and are guaranteed free from welds.

Manufactured Exclusively by

Titusville Forge Company
Titusville, Penna.

Distributed by

THE CONTINENTAL SUPPLY CO.
St. Louis, Mo.

OIL WELL SUPPLY CO.
Pittsburgh, Pa.

For Export

THE CONTINENTAL WELL SUPPLY CO.
72-76 Trinity Court, N. Y. C.

40 acres of the east 120 acres of the T. J. Swindel Survey.

Wilbarger County—Verschoyle & Vaughan's No. 1 G. B. Ancell, 150 feet south and west of the NE cor. of the west half of the NE of the NE of Section 3, Block 7, H. & T. C. Survey.

INDEPENDENT OIL MEN SECURE REVERSAL

(Continued from Page 164)

as to be indistinguishable upon hasty examination when more than a very short distance away. The Assistant Commissioner of Patents has now reversed the decision of the examiner in an extended opinion and without doubt the case will now go to the Court of Appeals of the District of Columbia, which is the final court of resort in trade-mark and patent cases.

The opposition to the registration of the trade mark of the independent oil men of America, "Red Hat Gasoline," for lubricating oils and gasoline, was represented by Messrs. Dyranforth, Lee, Chritton and Wiles for the Standard Oil Co., and Messrs. Mida and Wallace and Henry B. Floyd, representing the Independent Oil Men of America.

Commissioner's Decision

In reversing and dismissing the opposition, William A. Kinnan, First Assistant Commissioner of Patents, stated:

"This case comes on for review, on appeal of the applicant, Independent Oil Men of America, of the decision of the examiner of trade mark interferences sustaining the opposition filed by the Standard Oil company and adjudging the applicant not entitled to the registration for which it has applied.

"The opposition is presented under the confusion in trade clause of Sec. 5 of the Trade Mark Act of 1905. The goods are identical, the opposer was first in the field with its mark, has expended large sums of money in establishing the mark and the value and high grade of the goods which it sells under such a mark, and the mark is, in consequence, a valuable asset to its business. The applicant having adopted its mark presumably with the full knowledge of the long use by the opposer of its mark on the same class of goods and having an unlimited field from which to choose its mark must have any doubts resolved against it if there are any as to the probability of confusion of goods.

"The goods being identical, the only question here to be considered is the similarity of the marks and the consequent possibility of confusion of goods or of origin.

"There is no proof of actual confusion although the two marks appear to have been used side by side upon the same class of goods. The testimony of Reed proves no more than that gasoline pumps including the marks thereon looked alike when viewed from a distance but this similarity disappeared on a nearer approach. This would obviously be true, when the general similarity of the pumps is considered, even if there was no similarity at all in the two trade marks appearing on the pumps.

"The testimony of Robinson as to the results of his experiments with the students is believed to be properly admitted and considered for the reasons stated by the examiner of interferences. Robinson was a witness, under cross-examination, and he was correctly permitted to state what he did and the facts in connection with his activities. His conclusions drawn from such activities and facts may or may not be entitled to great weight. It is believed the conditions under which his students observed the trade marks are not fairly comparable with the conditions under which a purchaser would observe the marks of the parties here involved. It is well known that at gasoline filling stations a number of pumps, all painted red, and each having its sign at the top indicating the particular brand of gasoline supplied by such pump are to be found. Many purchasers of gasoline obtain it from such filling stations and such purchasers of necessity pick out the particular pump which indicates the brand desired when placing the automobile in position to receive the desired brand of fuel. It would seem such customer would be much less likely to be confused than would any of those of the students that were confused in connection with the tests of Professor Robinson. It is true, drivers of automobiles are not the only purchasers of gasoline but it is still believed one having become familiar with the opposer's brand of gasoline—no matter in what sort of container it appeared—would not be likely to confuse the applicant's trade mark appearing upon a container, with the trade mark of the opposer.

Use of Color

"Concentric circles are quite common in connection with trade marks upon various classes of goods. The color red is quite common and widely used in connection with a multitude of marks upon many different kinds of goods. The record shows that it is not only almost uniform practice, but that the laws of the State of Illinois where both parties operate, actually require users to employ the color red upon pumps, barrels and other containers of gasoline. The word "red," therefore, conveys nothing very distinctive as to a trade mark or the goods, and the complete notations 'Red Crown' and 'Red Hat' would be interpreted by the average observer or purchaser by the pictures of the crown and hat, respectively, appearing in the marks. In the applicant's mark, the representation is of an unusual and very distinctive type or style of hat. There is nothing connected with it which suggests the crown of opposer's mark. The notation, 'Red Hat,' as above stated, is interpreted or modified by the picture of the familiar, distinctive hat of the mythical Uncle Sam.

"The notation 'Red Crown' of opposer's mark is, to the mind of the average observer, interpreted, construed or modified by the representation of the crown of royalty. If concentric circles, with printing in the space between them, and the red color were fairly original with opposer, it is believed opposer should prevail, but when the fact is considered that these circles and printings are exceedingly common in trade mark signs and symbols, and the use of the color red is a right common to both parties and any and all other dealers in this class of goods, it must be held these features are not distinctive features of opposer's mark, would not greatly impress purchasers, and opposer is only entitled to protection as to the more salient and special features of its mark. It would seem there is nothing in common between the two marks when viewed in their entirety that would cause confusion in trade. It is believed the average purchaser, exercising any care at all, would not confuse the applicant's mark with that of the opposer, or the latter's goods.

"The opposer has urged that the applicant is not entitled to registration because not the owner of the trade mark. The examiner of interferences has held applicant's mark does indicate to consumers the origin of the goods, that the mark is, in consequence, capable of being owned, and that opposer is not entitled to raise, in the instant proceeding, the question of who is the owner of the applicant's mark.

"While the law is well settled, ownership of a mark can only exist in connection with the business carried on under it (Hanover Star Milling Co. vs. Metcalf, 224 O.G. 1407, 240 U.S. 403), yet the conclusion of the examiner as to this point will be accepted at this time and for the purposes of this proceeding."

BUYS WASKOM TRACT FOR BOOSTER PLANT

SHREVEPORT, La., Aug. 20.—A 30-acre tract of land west of Waskom in East Texas has been purchased by the Dixie Pipe Line Co. for a site of its two $500,000 booster plants to be built on the proposed line from Waskom to Houston and Port Arthur. The other station will be built at Livinston, Tex., about 80 miles north of Houston, where the line will branch to Port Arthur.

The Hope Engineering & Supply Co., which will lay the line and build the stations, expects to start actual construction the latter part of August. The Waskom station, according to present plans, will consist of 26 units developing a total of 4,680 horsepower.

THE WORLD'S FAIR of The Oil Industry

NELSON K. MOODY

President, Prairie Oil & Gas Company, Says

THE PRAIRIE OIL & GAS COMPANY has been heartily in favor of the Petroleum Expositions which have been held at Tulsa in the past, and is in favor of a continuation of these expositions from time to time. We will not only make it possible, but urge all of our superintendents and foremen throughout the field to attend this Exposition, as we feel it is of great benefit to our men to have this opportunity to study the latest appliances and ideas."

N. K. Moody

The fact that the Fourth International Petroleum Exposition will be strictly a scientific and technical show has attracted a larger number and greater variety of exhibits than at any previous Exposition. Oil and gas men should plan now to attend. For exhibition space, wire or phone, INTERNATIONAL PETROLEUM EXPOSITION, J. Burr Gibbons, 108 E. Third St., Tulsa, Okla., U. S. A. Phone 5605.

TULSA, SEPT. 24-OCT. 1

— built special for the oil industry

— for application in working barrels, hot oil pumps, etc.

— 4 kinds, all sizes, in STAINLESS STEEL - - CHROME MO-LYB-DEN-UM STEEL -- BRASS -- BRONZE.

Over 85% of the balls used in the oil industry are produced by STROM

Strom Steel Ball Co.

The largest independent and exclusive steel ball manufacturer
(Plant at Cicero, Ill.—suburb of Chicago)
360 No. Michigan Ave. Chicago, U. S. A.

Obtainable from leading jobbers—or write us direct.

Buy Strom Balls next time and note how much longer they last.

Strom Balls are held accurate to size to within, plus to minus, .00005 and sphericity to within .000025—*therefore all Strom Balls render a like service.* You can obtain Strom Balls through your regular supply jobber—if not, write us.

We can also furnish Strom "Stainless Steel" and Strom "Chrome Mo-lyb-den-um Steel" in bars for valve seats. These steels are developed by us and are of our own special analyses—the same as used in Strom balls.

RECORDING MAGNETOMETER MARKS ANOTHER STEP IN OIL FINDING

The recording magnetometer, now coming into more or less general use by the geological departments of many oil companies, marks another chapter in the employment of magnetic instruments for exploring regions which have promise of producing oil.

Horizontal field balance. For use as a magnetometer the telescope is removed.

For the man in the street, the magnetometer might be mentioned as an elaboration of the old miner's dip needle, and its operation is based upon the attractions of certain minerals and formations, which are reflected by the action of a magnetic needle suspended upon a dial. The magnetometer is thought to have great possibilities in locating buried granite ridges, and similar conditions of the subsurface.

The highly specialized trend of work has resulted in the formation of several subdivisions in the petroleum geological profession. Twenty years ago, there were comparatively few petroleum geologists, and their training was for the most part based upon general mining engineering. With the rapid advancement of the oil industry, there was a greater need for specilization, and the ranks of petroleum geologists were swelled. Hardly had this transpired when the subsurface geologist or paleontologist became more active, and more recent years have brought to the industry various instruments, the torsion balance, the seismograph, and the magnetometer, and the need of trained crews to operate them and record their actions.

A Field Balance

The magnetometer is a field balance with the telescope removed, and a recording photographic apparatus attached. The photographic part is focused on the magnetic needle of the field balance, and its variations pictured. The field balance is set up on a tripod and the needle registers the intensity of any geological disturbances in the rocks far below the surface. If a determination of the extent and depth of these geological disturbances is required, it is necessary to observe both the vertical and the horizontal intensity, and for these purposes, two kinds of balances are made, vertical and horizontal.

In the vertical field balance, a magnet is enclosed in an aluminum case, and the magnet system is balanced upon a quartz knife edge resting in quartz bearings in the direction perpendicular to the magnetic meridian. The arrangement of the horizontal field balance is similar except that the magnetic system stands vertical instead of horizontal and is tilted in the direction of the magnetic meridian by the horizontal intensity. These field balances are of simple construction, and the variations of their needles are easily read. In the field both vertical and horizontal balances may be carried upon the same tripod.

According to Dr. C. A. Heiland, of the Colorado School of Mines, Baron Roland Von Eotvos, the inventor of the torsion balance, did not supply his first instruments with photographic recording arrangements because he feared that they might have a disadvantageous influence upon the measurements, and fail to work when used in the field. Certain refinements have displayed that the photographic recording instruments are efficient, that their use saves much time and labor, and that magnetic measurements taken by this means are taken quicker than with a visual instrument.

According to some geologists, the magnetometer will be used to better advantage in the South Texas fields than in Oklahoma, where it is now being tried out. Subsurface conditions are responsible for this. The Oklahoma country thought to hold the oil fields of the future will afford little opportunity for the use of the instrument, because its effect upon the shales and slates which form the subsurface for several thousand feet will be negligible. According to one geologist, it will be necessary to have some hard rocks such as Arbuckle lime, or granite formations, and before the instrument may be used on these, much exploratory work will be required.

South Texas with its peculiar subsurface conditions offers a better spot for the use of the magnetometer, it is claimed. In this part of the oil country, there are numerous geological disturbances thrust upwards through several thousand feet of relief. In the Gulf Coast it is not uncommon to find a buried granite ridge extending 1,000 feet upwards from its original position, and in a country of such conditions, the magnetometer will probably prove successful.

SHORT TALKS ON SPECIFICATIONS

(Continued from Page 164)

by a larger one, which when stoppered, acts as a closed air chamber and prevents the flow of oil through the orifice until the stopper is removed. The apparatus is kept at the test temperature by means of a gas flame or is electrically heated with a coil as shown by C.

Method of Operation

In preparing the machine to run a test, the bath is filled with water or oil and heated to the specified test temperature. The tube must be thoroughly clean and then tightly stoppered with a cork. The oil to be tested is heated to the specified temperature in a separate container and then poured into the oil tube. Enough oil is poured into the tube to fill it exactly and any excess which spills over into the overflow cup is removed with a pipette just after the temperature of the bath and the oil have settled to the test temperature. To complete the test, the cork is quickly pulled from the end of the tube and the oil starts falling into the receiving flask. A stop-watch counts the time from the instant the cork is pulled until the oil fills the flask to the 60 cc mark. The time is recorded in seconds and is taken as the viscosity of the oil at the specified temperature.

Care must be taken to protect the interior of the tube, for even the slightest scratch on the metal at the orifice will cause incorrect readings and the tube should be checked from time to time with a certified instrument where exact viscosity readings are required.

GEOPHYSICAL RESEARCH BY SINCLAIR COMPANY

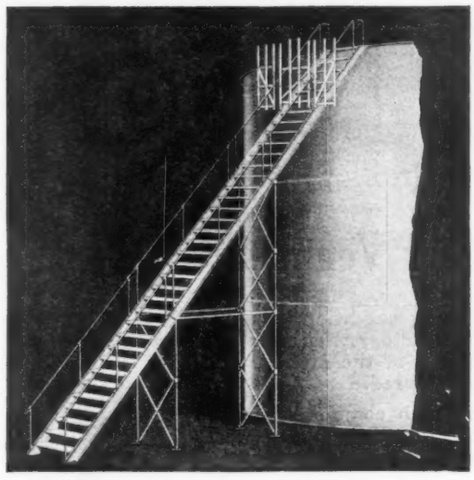
NEW YORK, Aug. 20.—It is reported that the Sinclair Consolidated Oil Corp. has decided to go into geophysical research and has organized a subsidiary with capital of $10,000,000 to carry on the work. Already $1,000,000 is said to have been expended on this development.

EXPLOSION IN BORNEO FIELD

CHATHAM, Ontario, Aug. 20.—Word has been received of a large explosion and fire in the oil fields at Miri, Sarawak, Borneo, where a number of Canadian drillers are located. Charles Macalpine of Petrolia is in charge of the field. Bud Hemingway, a driller from California, and five coolies were killed in the explosion or died from burns. Hemingway was about 400 feet from the well when the explosion occurred, but was severely burned and died the following day. So far as learned no Petrolia drillers were injured.

PARKERSBURG
Rig Irons
Including Common,
California
and A. P. I. Standard
☐
PARKERSBURG
Steel Wheels
☐
PARKERSBURG
Steel Derricks and
Steel Crown Blocks
☐
PARKERSBURG
All Steel
Standard Rigs
☐
PARKERSBURG
Portable
Drilling Machines
Wood and All Steel
☐
PARKERSBURG
Chain Driven
Sand Reels
and Bailing Reels
☐
PARKERSBURG
Bolted
Steel Tanks
☐
PARKERSBURG
Miscellaneous
Drilling Equipment
☐

Check the equipment in which you are interested, tear out and return this page to us, and we will send complete information.



Safe · Easy to Erect · Portable

BUILT from structural steel shapes, these steel stairways are strong, fireproof and safe. They are shipped knocked down, with the parts nested. Ordinary wrenches are the only tools required to erect them easily and speedily.

Component parts are bolted together and the entire assembly may be easily dismantled for removal to a new location.

Parkersburg Steel Stairways are adapted to various sizes of oil field, tank farm, pipe line and refinery tanks. Detailed specifications on request

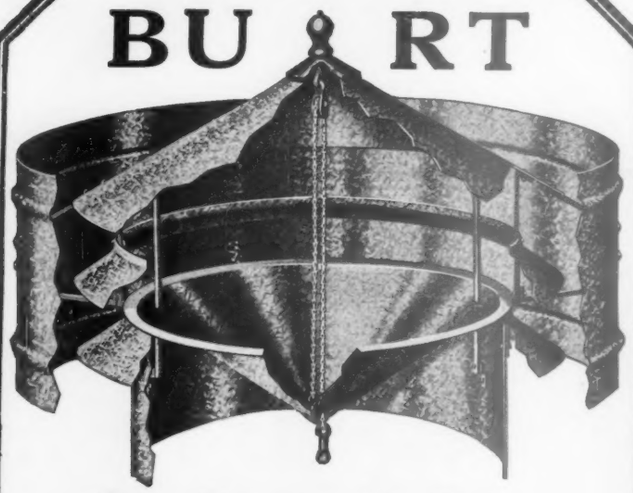
QUALITY SERVICE

The Parkersburg RIG & REEL COMPANY

Main Office and Works, Parkersburg, W. Va.

Sales Offices and Stocks Carried in Every Producing Field

BURT



Cone Damper Ventilator

Meets every ventilating condition, designed and built in the Burt factory where for over 30 years, only products of the highest quality have been manufactured.

Let us furnish you with complete information on how the BURT will help you create better working conditions in your plant.

THE BURT MANUFACTURING COMPANY
Pioneer Oil Filter Manufacturers
929 S. High Street, Akron, Ohio

AMERICAN
HEAVY DUTY
Roller Bearings

are standard equipment for the better

TRAVELING
and
CROWN BLOCKS

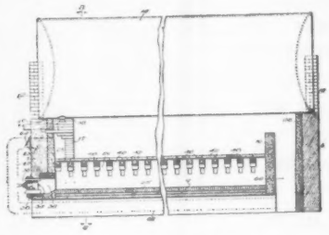
They Are Specially Designed for Oil Country Service

Ask for Catalogue 1006

AMERICAN ROLLER BEARING CO.
PITTSBURGH, PENNA.

which consists in mixing the oil by any suitable means with untreated, finely divided clays containing enough water to form a viscous, cohesive mass sufficiently fluid to be pumped through pipes, passing the mixture through a suitable heating device without heating the mixture to a temperature in excess of the boiling point of the oil being treated, then steaming down the hot oil and clay mixture to a temperature somewhat in excess of the boiling point of water and drawing off the vapors with the spent steam, further cooling the mixture to the desired temperature for separating the spent filtering material from the oil and separating the spent filtering material from the oil.

1,637,159. Furnace. Ivon S. Pieters, Chicago, Ill., assignor to Plibrico Jointless Firebrick Co., Chicago, Ill., a corporation of Illinois. Filed November 9, 1925. Serial No. 67,844. Seven claims. (Cl. 196—116.)



1. In combination, a furnace setting having an internal chamber, a still shell exposed to said chamber, and a pair of fire boxes disposed within said chamber and having side wal's provided with openings into the furnace chamber therethrough for directing the flames from said fire boxes against each other and into said internal chamber without direct impingement upon the still shell.

TAX ON MINERAL RIGHTS

CHATHAM, Ontario, Aug. 20.—That municipal districts in Alberta have the authority to assess mineral rights, including natural gas and oil rights, on the basis of fair actual value, is the opinion expressed by J. F. Lymburn, attorney general. The question arose in regard to the rights of the municipal district of Stockand No. 191, which embraces the Turner Valley oil field and the Royalite No. 4 well.

SCHOOL AND STATE LEASES

The commissioners of the Land Office of the State of Oklahoma will receive sealed bids until 2 o'clock p. m., August 30, 1927, for oil and gas leases on school and state lands as follows: Garfield County, SE Section 13-21n-4w, 160 acres.

The commissioners will receive sealed bids until 2 o'clock p. m., September 6, 1927, for oil and gas leases on school and state lands as follows: Kay County, SE Section 36-28n-1w, 160 acres. Oklahoma County, W half NE Section 16-12n-3w, 80 acres; W half SE Section 16-12n-3w, 80 acres.

WARNER CLARK IN CHARGE

FORT WORTH, Tex., Aug. 20.—Warner Clark, who will have general charge of the California Co's. operations in West Texas, was a recent visitor in Fort Worth and his recent appointment to the new post is regarded as an indication of the California Co's. intention to be strongly entrenched in West Texas. The company is a subsidiary of the Standard Oil Co. of California. Heretofore the California Co's. operations in West Texas have been carried on through various departments.

FLYING BOAT FOR COLOMBIA

NEW YORK, Aug. 20.—The Sikorsky Manufacturing Corp. has just completed an eight-passenger flying boat for the Andean National Corp. The airship will be used as an express, passenger and payroll carrier to stations up and down the Magdalena in Colombia, South America. Andean National operates two oil pipe lines connecting the DeMares concession of the Tropical Oil Co. with the seacoast at Cartagena. Tropical Oil is a Standard Oil subsidiary.

TO SELL GULF COAST RIGHTS

AUSTIN, Tex., Aug. 20.—The State will sell oil and gas rights on 567,920 acres of Gulf Coast land to the highest bidders, September 30, Land Commissioner J. T. Robison announced Friday. One-eighth of the royalties will be retained to the state. No bids under 10 cents an acre will be considered. The land is distributed by counties as follows: Calhoun, 101,739 acres; Chambers, 149,100; Galveston, 145,300; Jackson, 3,837; Matagorda, 150,380; Nueces, 17,564.

VENEZUELAN SHIPMENTS FOR HALF YEAR

Oil production in Venezuela in June totaled 4,806,580 bbls., averaging 160,219 bbls. daily, compared with total of 4,630,275 bbls., an average of 149,363 bbls. daily, in May. In June, 1926, total was 2,951,381 bbls., average of 98,379 bbls. daily. Production in the six months ended June 30, 1927, totaled 27,697,716 bbls., compared with 16,872,451 bbls. in corresponding 1926 period. Shipments in the first six months this year totaled 21,912,464 bbls., against 15,570,836 bbls. in the 1926 period.

Production by companies in June and May, with daily averages and comparative figures in June, 1926, in bbls., follow:

	June	Daily	May	Daily	June, 1926	Daily
V. O. C.	1,740,634	58,021	1,736,595	56,019	796,448	
Gulf-Creole	660,333	18,678	393,619	12,697	229,000	
Gulf	342,000	11,400	269,300	8,687	276,000	
Gulf-V. Pet.	327,000	10,900	291,400	9,400	.....	
Lago Oil	975,113	32,504	1,049,446	33,853	511,973	
Lago-Maxud.	.....	.....	53,051	1,711	.....	
Carib. Pet.	615,000	20,500	589,000	19,000	945,000	
B. C. O., Ltd.	193,500	6,450	202,864	6,544	192,960	
General Asphalt	53,000	1,766	45,000	1,452	.....	
Total	4,806,580	160,219	4,630,275	149,363	2,951,381	

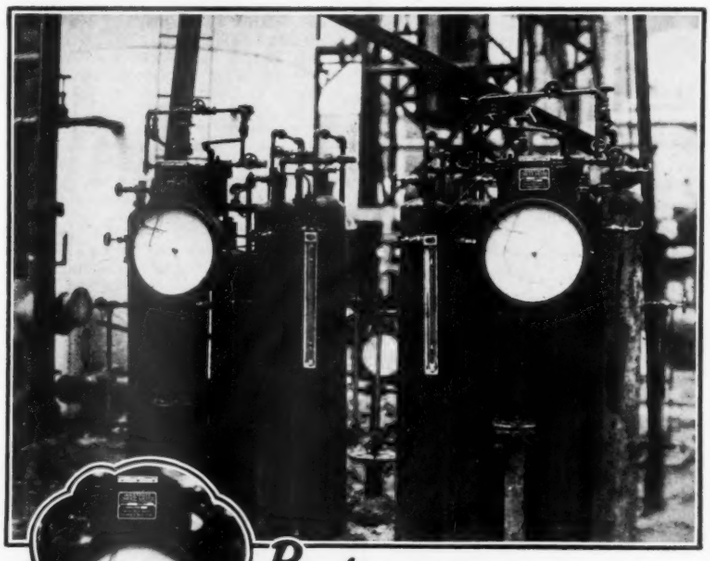
June shipments totaled 3,848,822 bbls., average of 128,294 bbls. daily, against 3,796,507 bbls., average of 122,467 bbls. daily, in May. Shipments by companies in June and May, with daily averages, and shipments in June, 1926, in bbls., follow:

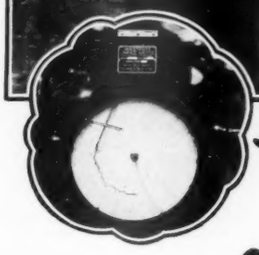
	June	Daily	May	Daily	June, 1926	Daily
V. O. C.	1,555,400	51,846	1,328,322	42,849	636,300	
Gulf-Creole	224,084	7,469	261,653	8,440	208,000	
Gulf	211,279	7,043	249,700	8,055	253,700	
Gulf-V. Pet.	204,876	6,829	270,676	8,731	.....	
Lago Oil	830,183	27,673	866,178	27,941	483,900	
Lago-Maxud.*	.....	.....	.....	.....	.....	
Carib. Pet.	585,200	19,507	569,200	18,361	843,000	
B. C. O., Ltd.	184,800	6,160	205,778	6,638	260,700	
General Asphalt	53,000	1,767	45,000	1,452	.....	
Total	3,848,822	128,294	3,796,507	122,467	2,745,600	

*Crude is topped at Lago La Rosa refinery.

Lagunillas continued the leading field, producing 2,358,579 bbls. in June, an average of 78,619 bbls. daily, compared with 2,107,112 bbls. in May, average of 67,971 bbls. daily. La Rosa produced 1,532,733 bbls., 51,091 daily, against 1,500,779 bbls., average of 48,412 bbls. daily, in May. Mene Grande Field produced 615,000 bbls. in June, average of 20,500 bbls. daily, compared with May total of 589,000 bbls., 19,000 bbls. daily. In June, 1926, Lagunillas was not producing, while La Rosa produced 1,538,941 bbls., average of 51,298 bbls daily, and Mene Grande produced 945,000 bbls., average of 31,500 bbls. daily.

PUT SURE IN MEASUREMENT





Between PUMPS AND ABSORBERS—Accuracy.

Exact records of various refinery operations are more in demand—

Metric orifice meters are giving refiners eyes that they may see and records that they may know.

Every modern refining process is capable of checking by orifice meter. And a fair share of the progress from better methods and better results is creditable to these little instruments that have replaced darkness and guess work by vision and accuracy.

The refineries that are setting the pace in progressive practices are developing closer means of checking each step. Since the orifice meter is the most adaptable measuring device for such work, their installation is multiplied by the new uses for which they are constantly being requisitioned.

This view of two orifice meters illustrates a particularly popular use. The installation is at the West Coast Refining Company, Placentia, California. It shows their method of securing accurate determinations of the oil pumped to absorbers. Although the use of the cylinders is unique, the application of the orifice meter to this particular service is typical of the more important refineries.

Orifice meters are established in refineries from start to finish on their merit for accuracy, adaptability, ease of operation and complete dependability.

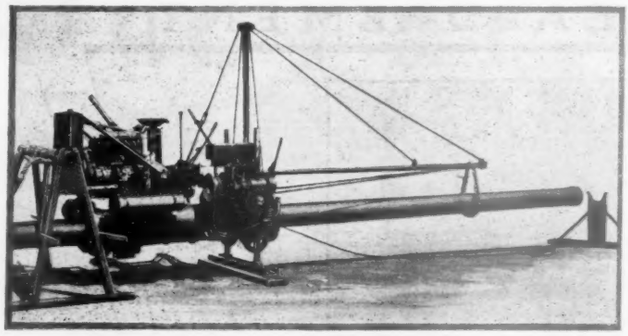
Have you been overlooking opportunities where they can help?

METRIC METAL WORKS
of the American Meter Company, Inc.
ERIE · PENNSYLVANIA · U·S·A·

METRIC orifice METERS

—for gas—for oil—for steam—for water

SET THE STANDARD FOR MEASURING ACCURACY



The California Pipe Line Machine

because it effects a drastic saving in pipe line construction costs is used on practically all big pipe line jobs. The following companies and pipe line contractors are among our customers:—

Gulf Pipe Line Company	Andian National Corp.	Ford, Bacon & Davis
Humble Pipe Line Co.	Asiatic Pet. Co.	Geo. Greenan
Ozark Pipe Line Co.	E. A. Macpherson	U. S. Morris
Standard Pipe Line Co.	Connor & Sons	W. R. Morris
Oklahoma Pipe Line Co.	Williams Bros.	Hope Engineering Co.
Gypsy Oil Co.	Sheehan Bros.	

Machines for sale or lease.

California Pipe Line Machine Company

J. J. MAHONEY, President

KANSAS CITY, MO.

H

Extravagance or Economy

What is an extravagant price to pay for Bit and Jar Steel?

Any price—high or low—that fails to give value!

For Cable tool and Fish Tail Bits specify Diamond "H" Bit and Jar Steel.

Made in small furnace insuring exceptional uniform quality.

HEPPENSTALL Forge & Knife Co.

Pittsburgh, Penna.

Fort Worth — Texas Office
1415 F. & M. Bank Building

JOHN D. ROCKEFELLER REVISITS THE SCENES OF HIS BOYHOOD

AUBURN, N. Y., Aug. 20.—John D. Rockefeller this week came back to the scenes of his boyhood among the Finger Lakes and took motion pictures of three of his former homes and familiar spots where he earned his first money, learned to swim and caught perch with a bent pin rig.

"I'm coming back every year as long as I live and am able," he promised, "but if infirmities prevent I will have these pictures to refresh fond memories."

Mr. Rockefeller at Cascade, on Owasco Lake, dined on lake trout out of the waters in which he fished as a boy under 10. And after eating, he he'd up the start back long enough to be photographed with the chef, who, he said, "had broiled those beauties just like mother used to do over there across the lake."

Mr. Rockefeller and a party of five spent a night in Owego, 3 miles east of which he lived from 1849 to 1853. He visited his old home there, went on to another humble abode, where he was born, on Old Michigan Hill, 4 miles from Richford, and then motored up to Moravia, near Owasco Lake. He visited the spot on the east shore of the lake, where he lived from 1843 to 1849 in a house burned two years ago when used by a convict road camp.

Scene of His First Deal

At Cascade he told of the habits of industry he learned as a boy on Owasco Lake, pointing across the waters to the sunlit hills beyond. He indicated a little woods.

"That's the place I started my first business transaction," he said. "Into that woods as a boy of 9 I saw a turkey hen stealing away. For days I hunted her nest, and when I found it, mother said I might have the hen and chicken for my own. She fed them curds from the milk, and kitchen scraps. One of my life's hardest tasks was keeping those chicks from drowning in heavy rains. But that fall I sold them in Moravia market, earned my first money and put it in a china dish on the mantel as the start toward independence. Finding the turkey hen taught me my first lessons in recovering property which otherwise would have gone to waste and nursing it along into paying a profit."

Mr. Rockefeller declared he had no fears for the younger generation, as contrasted to the harder life of his own boyhood. "They will come home all right," he declared, and reminiscently recalled earlier days when he had his daily tasks of weeding the garden, milking the cow, keeping the wood boxes filled and chopping kindling.

"I remember well the winter nights when gales across old Owasco sent snow sifting through the walls of my upstairs room. Father used to buy the cutting rights to woodlands, and many a day we boys were awakened of a winter's morning when the gang was starting for the woods, with no lights but the stars and a lantern, and the brittle snow squealing under the runners of the sleds."

Thrill of His Boyhood

Then he pointed toward the south. "Over there I got the thrill of my young life when a deer burst from the woods, followed by hounds, and swam to safety across the lake."

Mr. Rockefeller said he received his first schooling on Owasco's shores.

"Father did much toward providing a district school there," he explained. "To find the middle of the district he drove from the north to the south boundary and counted the number of times the buggy wheel turned. Then he drove back for half as many revolutions, stopped and there located the plain frame school house. Sunday school was held in the same place."

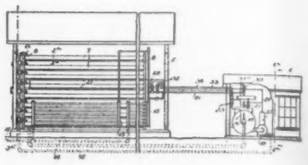
Mr. Rockefeller found the years are taking their toll in the land of his boyhood. He visited the home of Door Van Arsdale, who owned the old Rockefeller home on Owasco, and whose tenant house had been the Rockefeller homestead. Van Arsdale died a month ago. Mr. Rockefeller found his cousins, Mr. and Mrs. John P. O'Hara, away on a trip. But the landmarks he knew so well were there to greet him under a smiling sky.

The customary dimes, new and shiny, were dispensed by the oil man to all he met, with one too for every near relative of the recipient.

"I will never buy these old Finger Lakes homes of mine," he said. "Sentiment that surrounds them cannot be purchased, and is not a thing for cash. To me they're all home, whoever the owner."

Recent Patents

1,636,730. Apparatus for Regulating Wax-Sweating Systems. Samuel S. Amdursky, Rochester, N. Y., assignor to The Taylor Instrument Companies, Rochester, N. Y., a corporation of New York. Filed October 9, 1923. Serial No. 667,499. Three claims. (Cl. 196—20.)

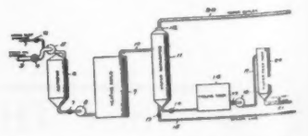


2. In apparatus for heat-treating wax, the combination with an open container for receiving the wax to be treated, of means for confining the atmosphere surrounding the container, means arranged to distribute heat through a body of wax occupying the container, means supplying heat to the atmosphere surrounding the container, and means for automatically regulating the temperature of said heat distributing means and the temperature of the atmosphere surrounding the container, operative to increase the temperature of the heat distributing means at a greater rate than the temperature of the surrounding atmosphere.

1,636,946. Purification of Oils. Friedrich W. Weber, Hackensack, N. J. Filed March 18, 1926. Serial No. 95,800. Five claims. (Cl. 196—44.)

5. The method of purifying crude petroleum and the various distillates obtained therefrom by means of sulphuric acid, said method comprising agitating the oil, adding sulphuric acid to said oil forming a sludge thereby, separating the sludge from the acid oil mixture, agitating the acid oil mixture, adding to the agitated acid oil mixture a colloidal ferric chloride liquor, containing basic ferric chloride and the basic chlorides of rare earth metals, thereby precipitating ferric hydroxide, adding an excess of a practically saturated solution of sodium silicate to the reaction mixture, thereby immediately causing a voluminous heavy precipitate of silicon hydroxide and of the hydroxides of the rare earth metals, causing the combined metal hydroxides and the excess of the aforesaid sodium silicate solution to settle out from the oil, separating the aforesaid mixture of metal hydroxides and the excess of the sodium silicate solution from the oil, and distilling the same in any of the well known ways.

1,636,938. Art of Decolorizing, Clarifying, and Purifying Petroleum Oils. Harold Lester Kauffman and Irwin Arthur Clark, Denver, Colo., assignors, by mesne assignments, to said Kauffman. Filed November 11, 1924, Serial No. 749,353. Renewed February 25, 1927. Six claims. (Cl. 196-147.)



1. An improved process of decolorizing, clarifying and purifying petroleum oils

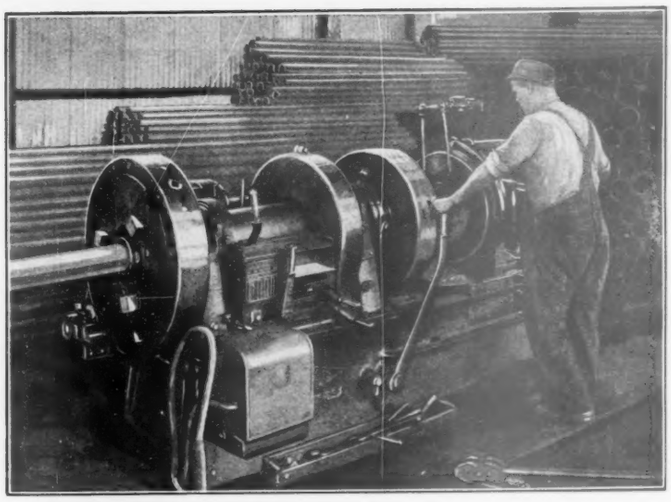
Notice the cutting edge . . .

The cutting edge of the Peerless Expanding die on a B & K pipe threading machine is well ahead of the center line. This is in accordance with the best practice for all lathe and similar tools.

Peerless dies have the curved eccentric relief. This makes the die clear the pipe while cutting. At the same time it follows the cut so closely that there is little danger of a chattered thread. This type of die requires only about one-half as much power as any other because of the absence of friction. For rapid, low cost pipe threading B & K machines have established their superiority in over fifty years of service.

BIGNALL & KEELER MACHINE WORKS
of the N. O. Nelson Manufacturing Co.
Edwardsville, Ill.

D&GJ 8-25 Gray



New Threads on all your pipe!

Every length of Greenspon's reconditioned pipe has new threads and new couplings. Every length is rigidly inspected and is guaranteed. You can save real money on Greenspon's pipe, stocked in all sizes for immediate shipment. ODEE pipe for gas lines saves you 50% of field welding. Casing in all sizes, too! Write, wire or phone for quotations.

Jos. GREENSPON'S Sons
Iron & Steel Company

General Office: St. Louis *Branches:* Tulsa, Okla., Ft. Worth, Texas

"I've never broken one yet!"

Pride of accomplishment shows itself in many ways.

This workman, when asked if the parts of Ford Tribloc Chain Hoists withstood the hammering and driving incident to renewing load chains, remarked "I've never broken one yet!" With that he brought his 2-pound hammer down on the internal gear with all the strength in his sinewy arm. Nothing happened, except that the hammer made a slight dent in the surface.

Ford Tribloc Chain Hoists are made to such high standards in every detail—from the selection of the metal to the final tests of the finished hoists—that thousands of Triblocs have been bought for the use of each of many large corporations.

And because these large purchases are based on something besides mere opinion, you may be sure that such hoists as these are sure to give gratifying results in your shop.

Send for Catalog 7-B.

FORD CHAIN BLOCK COMPANY
2nd and Diamond Sts., Philadelphia, Pa.

Cost more to make
Cost less to use
!
TRIBLOC CHAIN HOIST

EXAMPLE OF SOVIET FEARED IN MEXICO

By N. O. Fanning

NEW YORK, Aug. 20—Fear is being entertained by American oil companies with interests in Mexico that the Calles administration is being encouraged by recent events in Russia and that the ultimate intention may be to nationalize the Mexican oil industry and attempt to operate it to the exclusion of the present owners.

This is believed to be back of the new protest made by oil operators to Secretary of State Kellogg, charging that their property rights in Mexico have been abrogated by recent acts of the Mexican Government and urging that the strongest representations be immediately dispatched to the Calles administration in their behalf.

Even though no direct pressure had been brought to bear by the Soviet representatives who visited Calles in recent months, oil men here are of the belief that the initial steps taken by the present administration in Mexico indicate a leaning toward policies which have been carried out in Russia. The apparent success of the Soviet oil administration in selling products in Europe and the Near and Far East, it is felt, has prompted Calles to defy vested property rights of American citizens.

At the same time, there has sprung up some difference of opinion in Mexico over the present oil policy, largely as a result of the steady decline in production in Mexico and consequent reduction of the revenues from this source.

Guy Stevens, head of the Association of Producers of Petroleum in Mexico, with offices here, led the recent delegation of oil men who visited Secretary of State Kellogg. Mr. Stevens recently went on record in a communication to the United States Chamber of Commerce as being bitterly opposed to Soviet policies, and he is not the only one in close touch with developments in Mexico who has felt that President Calles and his followers are pattering his policies after those in Russia.

In the recent Nicaragua crisis the charge was made openly in a report by Secretary of State Kellogg that Russian Soviet influence was at work in Central America, and while many were inclined to belittle this, some have always thought there was more behind it than appeared at the time.

Whether the American Government will protest in accordance with the request of the delegation or not is too early to say, but it is expected the whole question of Mexican oil policy will come up for discussion once more and that the real intent of the Calles administration will be made clear and steps taken accordingly by the United States to protect its nationals.

DEPRECIATION OF OIL EQUIPMENT DETERMINED

WASHINGTON, D. C., Aug. 20.—The percentage allowed for depreciation of oil well drilling tools and equipment, which would constitute a reasonable allowance, has been determined by the United States Board of Tax Appeals in the case of the appeal of E. B. Miller of Tulsa, Okla.

In this case the commissioner of internal revenue determined that a depreciation allowance of $1,929.72 was reasonable and the petitioner claimed that a reasonable allowance would have been $2,588.51. Another company, the Roland-Miller Drilling Co., in which the petitioner had an interest of three-eighths, had an investment January 1, 1919, in drilling equipment of $3,200, to which was added during the year $241.53. The commissioner allowed depreciation of $734.93, and the petitioner claimed $830.19.

The decision of the board of tax appeals states that the petitioner kept no record of the useful life of tools and adds:

"The useful life of the various tools varied greatly in length in different territory, depending upon the character of the earth strata and the depth of the holes. Under some conditions a string of tools would last not more than two years; under other conditions they could be used from five to seven years. It also happened occasionally that tools would break or be lost in a hole while comparatively new. During 1919 the partnerships operated in the Drumright field, where deep drilling was done, and experience showed the average life of tools in that region was about four years. We find a reasonable rate for depreciation in 1919 is 25 per cent."

In the case of the Golconda Oil Co. of Wichita Falls, Tex., petitioner against the commissioner of internal revenue, the United States Board of Tax Appeals holds that depreciation of equipment of an oil well allowed on a unit of production basis, rather than a straight line basis, as useful life and value, depend upon the rate of extraction of oil content.

The respondent allowed depreciation upon this equipment at the rate of 25 per cent per annum for seven months, in the amount of $2,792.53. Petitioner contends that the depreciation to which it is entitled should be arrived at by dividing the estimated oil reserves recoverable from the well in question during the life of any particular piece of equipment into the investment for such equipment at the close of the year 1919, and multiplying the unit thus obtained by the number of barrels of oil produced from that well in the year 1919. If calculated on that basis, the allowance for depreciation for 1919 would amount to $7,900.35.

The equipment in question consisted of casing in the well, pipe, tank, engines, rods, etc., of a kind ordinarily used in producing oil from a depth of about 1,600 feet. The useful life of no part of this equipment was longer than the life of the oil deposit from which the oil was produced, the Board says. The well in question, like all other wells in the vicinity of Wichita Falls, the board says, after having been fully completed and started to producing, would gradually decline in daily output to a point at which it would no longer be profitable to operate it and would then be abandoned. An expert would fix its probable profitable life at from 6 to 10 years. Salvage sales would then be negligible. Such a well, the decision declares, would ordinarily produce one-half of its total ultimate production within from one to two years after its completion.

Judge Milliken, in rendering the opinion of the board states: "We are of the opinion that a reasonable allowance is measured by a depreciation of the equipment at the same rate as that at which the oil was depleted in the year, which results in an allowance of $7,900.35, pursuant to the facts stipulated."

SOVIET OIL PRODUCTION

WASHINGTON, D. C., Aug. 20.—Oil production and oil exports of the Soviet Union for May established a new record for the Russian oil industry, according to the report for the month received by the Soviet Union Information Bureau. The output was 908,700 metric tons, nearly 20 per cent above the average monthly output for 1913, and the exports were 187,935 metric tons, nearly 2½ times the average monthly figure for 1913. The output compares with 839,000 tons for April, an increase of 8.3 per cent, and 739,006 tons for May, 1926, an increase of 23 per cent. The exports compare with 166,031 tons for April, an increase of 13.2 per cent, and 103,224 tons for May, 1926, an increase of 82.1 per cent. Of the exports 45,492 tons went to Germany, 42,727 tons to France, and 26,477 tons to the British Empire, of which more than half was absorbed by Egypt.

PLEASANT HILL BRANCH LINE

SHREVEPORT, La., Aug. 20.—Magnolia Petroleum Co. started work the past week on laying of a 4-inch branch line from its main line in the Bull Bayou Field to the Pleasant Hill district of northern Sabine and southern DeSoto Parishes. The line will be approximately 15 miles long and as a mile a day is being laid it should be in operation early in September.

KELLOGG PIPE STILLS

SERVICE
to the refiner

Kellogg welcomes the opportunity to be of service to the refiner in planning the construction of pipe stills, and related equipment.

If you will outline your requirements, stating the results to be obtained and the products desired, Kellogg engineers will design the necessary plant, and guarantee the performance of the equipment recommended.

KELLOGG

CROSS CRACKING PLANTS—BUBBLE TOWERS—PIPE STILLS—HEAT EXCHANGERS—GRAY TREATING TOWERS—TREATING PLANTS

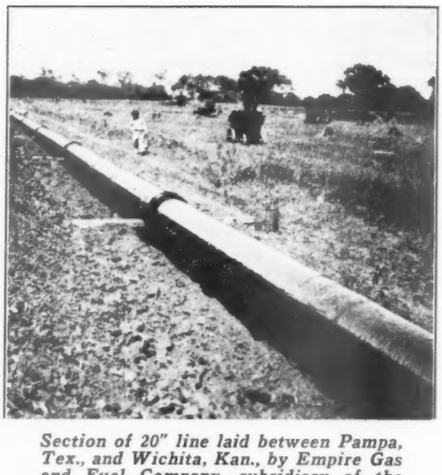
THE M. W. KELLOGG CO., 7 DEY STREET — NEW YORK

KANSAS CITY, MO., 700 BALTIMORE AVE. — SAN FRANCISCO, CAL., 444 MARKET ST.
LOS ANGELES, CAL., 329 PETROLEUM SECURITIES BLDG.

INVESTIGATED and SELECTED
for the
WORLD'S LARGEST NATURAL GAS LINES

Section of 22" line laid between Monroe and Baton Rouge, La., by Interstate Natural Gas Co. Ford, Bacon & Davis, Engineers. Pipe laying by Williams Bros., Tulsa, Okla.

The Interstate Line which runs between Monroe, La., and Baton Rouge, La., and the new Empire Line now being laid for 250 miles between the Texas Panhandle and Wichita, Kansas, are the two largest natural gas lines in the world. Extensive investigations conducted by the engineers in charge resulted in the adoption of BITUMASTIC ENAMEL for protecting 85 miles of the 22" pipe used in the Interstate Line and for protecting the entire 250 miles of 20" pipe used in the Empire Line. The coating for this latter line will require 120 carloads of 40,000 lbs. each.



Section of 20" line laid between Pampa, Tex., and Wichita, Kan., by Empire Gas and Fuel Company, subsidiary of the Cities Service Co. Pipe laying by Booth and Flinn, Ltd., Pittsburgh, Pa.

BITUMASTIC
Reg. U. S. Pat. Off.
ENAMEL

AS recently as ten years back, many of the largest oil and gas companies believed that their underground pipe lines would not suffer seriously from electrolysis or corrosion. This proved to be a costly conclusion, for many of these lines have since been lifted and replaced or relaid.

The extent of this unnecessary damage and the magnitude of the expense involved are indicated by the fact that engineers are now conducting exhaustive investigations to determine the best means for protecting these lines against corrosion. And it is significant that, as a result of these investigations, the largest lines in the world, as well as many of the smaller lines, have selected BITUMASTIC ENAMEL.

Their choice is based upon the fact that there is no possible substitute for experience. BITUMASTIC ENAMEL is the only pipe coating in the world with a record for longevity that dates back for more than forty years. It has been used throughout this period to protect important marine structures and ships. It has been used to protect fully 90% of the important steel water mains laid in this country in the last eleven years. It has been used to protect artificial gas mains and oil and natural gas lines—long outlasting, in each instance, any other coating ever applied to pipe laid under similar soil conditions. Throughout forty years, in fact, there has never been a case of failure in any instance where this durable ENAMEL has been properly applied.

The full story of BITUMASTIC ENAMEL and its use in the oil and gas industries is presented in our book—"The Protection of Pipe Lines." Write for a complimentary copy.

WAILES DOVE-HERMISTON CORPORATION
17 Battery Place, New York
1 North Frankfort St., Tulsa

Philadelphia Cleveland Chicago San Francisco

EASTERN FIELDS

(Continued from Page 70)

No. 3 on the M. Hardman farm. In Lee district, G. L. Cabot has made a location on the Leona M. Nicholson farm. In the same district, Mr. Cabot has made a location on the L. H. Booher farm. In Center district, Wetzel County, the Hope Natural Gas Co. is pulling the tubing to drill deeper No. 1 on the J. K. Long farm. In Church district, the Pittsburgh & West Virginia Gas Co. has started to drill a second test on the L. K. Hoge farm. In Union district, Lincoln County, G. T. Ray & Son are rigging up on the Robert Stowers farm. In Carroll district, L. R. Sweetland is rigging up at No. 22 on his own farm.

Southeast Ohio

In Section 10, Perry Township, Licking County, the Pure Oil Co. has completed and shot in the Clinton sand No. 6 on the I. E. Seward & Co.'s farm. It produced 45 bbls. the first 24 hours. In the southeast quarter of Fallsbury Township, same County, W. L. Brown & Co.'s No. 3 on the Allen Cessna farm is a 15-bbl. pumper in the Berea grit. In the northeast quarter of Section 2, the Arkansas Fuel Oil Co.'s No. 3 on the Dertram G. Anderson farm is good for 8 bbls. a day in the Berea grit.

In the northeast quarter of Section 14, Perry Township, Coshocton County, the Preston Oil Co. has completed and shot in the Clinton sand a test on the Diver McMillan farm. It produced 17 bbls. the first 24 hours.

Cow Run Duster in Meigs County

In Sutton Township, Meigs County, the Sumner Oil & Gas Co. has drilled No. 4 on the William D. Roush farm through the second Cow Run sand and dry. They are now drilling it to the Berea grit. In Section 22, Washington Township, Hocking County, the Ohio Fuel Supply Co. is drilling a test on the H. R. Heinscheld farm. In Salisbury Township, Meigs County, the Ohio Fuel Oil Co. has started to drill a test on the W. E. Peoples farm.

In Section 19, Marion Township, Morgan County, F. M. Selby has a duster in the Berea grit at a second test on the Oliver Edgerton farm. In Section 73, Athens Township, Athens County, Gross & Co. have a very light pumper at a test on the W. H. Cuckler farm. It is too light to make a profitable producer and will be abandoned.

In Lot 34, Canaan Township, Athens County, W. W. and A. T. Wehrle have a duster at a test on the J. H. Hope farm. In Alexander and Athens Township, the Townsend Oil & Gas Co. and Gross & Frebault are drilling Nos. 10 and 4 on the Elizabeth Smoot and B. Irwin farms.

In Section 7, Lawrence Township, Washington County, George T. Gale & Co.'s test on the J. H. Alexander farm is a duster in the Berea grit. In Section 1, Marietta Township, F. J. McCalley & Co. have a 3-bbl. pumper at a test on the Frank-Christy farm. In the same township, B. E. Crippin and others are drilling a second test on the Hart-Patting farm.

In the northeast quarter of Section 6, Franklin Township, Licking County, the Ohio Fuel Supply Co. has completed in the Clinton sand a test on the Austin Orr farm. It found only 4 feet of sand at this location and just a very light show of oil in the Berea grit.

In the northeast quarter of Section 11, Rush Creek Township, Fairfield County, the Kittle Oil & Gas Co. drilled a test on the F. M. Kittle farm through the same formation to a total depth of 3,360 feet, and it is dry.

Shallow Sand Duster

In the southeast quarter of Section 8, Pike Township, Perry County, C. M. Foraker, trustee, completed in the Berea grit a test on the T. W. Bennett farm. It found no oil or gas and falls to the duster list. It will be noted that all are test wells, located on the farms named.

In Section 21, Harrison Township, Perry County, the Melick Oil Co. has the rig completed for a test on the George Wilson farm. In Section 20, the Milligan Oil Co. has the rig completed for a test on the Robert Whitehouse farm. In the same section the Glendale Oil & Gas Co. has a rig up on the J and M. Starcher farm. William Cline and others have the rig completed for a second test on the Timmins Coal Co.'s farm.

In the southwest quarter of Section 18, Reading Township, Perry County, Dean Egert & Co.'s test on the George Edman farm is a duster in the Clinton sand. In the northeast quarter of Section 24, same township, Henderson & Co. have a gasser good for 1,250,000 feet in the Clinton sand. The total depth of the well is 2,960 feet.

In the southwest quarter of Section 24, Green Township, Hocking County, the Griffin Producing Co. has completed in the Clinton sand a test on the Moses O'Hara farm. It got a light showing oil, considerable salt water and no gar. Its total depth is 2,880 feet.

Licking County

In Section 10, Franklin Township, Licking County, W. W. and A. T. Wehrle completed in the Berea grit No. 6 on the Elma Vance farm. It is a very light pumper. In Section 33, Hopewell Township, the same parties completed a test on the Mearle Dodson farm. It is a gasser in the Big Lime formation at a total depth of 2,417 feet. It has not been shot.

In Lot 14, Section 5, Chatham Township, Medina County, E. R. Edson, Son & Co. have a very light pumper at No. 24 on the William P. Wertz farm. In Section 21, Knox Township, Jefferson County, Harry E. Tope & Co. have a 7-bbl. pumper in the Berea grit at a second test on the R. W. Dinsmore farm.

In the southeast quarter of Section 13, Reading Township, Perry County, the Ohio Fuel Supply Co.'s test on the D. G. Love farm is a gasser in the Clinton sand good for 450,000 feet. In Section 19, same township, C. C. Lilliard and others have started to drill a test on the Samuel Barnes farm.

In Section 2, Athens Township, Athens County, W. W. & A. T. Wehrle completed in the Berea grit a test on the Joseph A. Mulligan farm. It is a gasser good for 2,000,000 feet in this formation.

In the northwest quarter of Section 24, Jefferson Township, Noble County, Homer Cain and others have completed in the Germantown sand a test on the Alexander Singer farm. It is a duster.

Southwest Pennsylvania

In Findlay Township, Allegheny County, the Link Oil & Gas Co. has completed in the 30-foot sand a test on the Kale heirs' farm. It is showing for a 4 or 5-bbl. pumper.

In Springhill Township, Greene County, the Keystone Oil & Gas Co. has drilled in a gasser at a test on the Benjamin Stipes farm. In Morris Township, the Carnegie Natural Gas Co. and the Fox Oil & Gas Co. have rigs up for tests on the J. M. Patterson and W. B. Phillips farm.

The good gas well drilled in on Scenery Hill, near Washington, Pa., is attracting attention. It has been connected and turned into the Peoples Natural Gas Co.'s line. The flow of gas has not been taken, but is estimated at from 2,000,000 to 6,000,000 feet and is the best gas well drilled in Washington County in a number of years.

Oil Fields Once Active

That those who were at one time active in the development of the fields in Washington County may see to what a low level operations have fallen, the work at the present time consists of the following wells drilling: Nottingham Township, James Lyle No. 1 William McNary; Morris Township, Manufacturers Light & Heat Co.'s No. 3 David Craft; Natural Gas Co. of West Virginia's Nos. 1 S. B. Minton and L. S. Bay; North Fayette Township, Beggs & Co.'s No. . J. Walker.

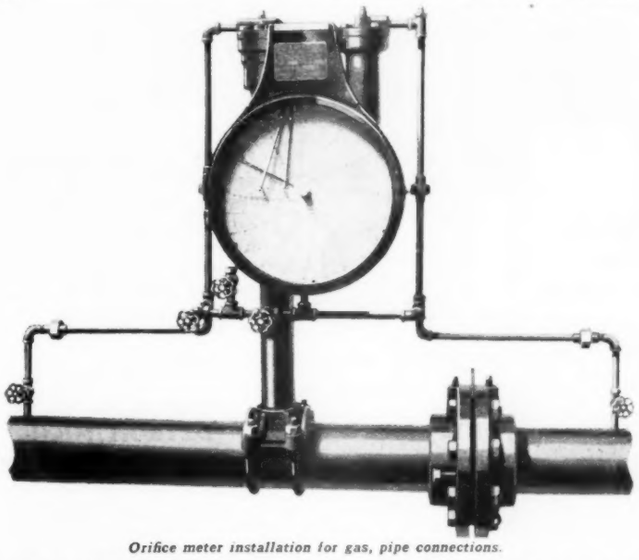
Allegheny County makes a very little better showing. In Plum Township, O. S. Grubbs & Co. and E. R. Buzard are drilling tests on the O. S. Grubbs and Charles F. and Florence A. Selleck farms. In McCandless Township, the Duff City Gas Co. is drilling a test on the A. Aultmyer farm. In North Fayette and Findley Townships, M. Matkovich and the Link Gas Co. are drilling tests on the Hankey Baking Co. and the Kale heirs' farms. At the first of the month, Beaver County had no wells drilling.

DEVELOPMENT OF THE MEASUREMENT OF GAS

(Continued from Page 64)

were chosen by the first experimenters as being the points at which the differential would be approximately the least and the most consistent that could be obtained from any combination of points. In other words, the line pressure at a point 2½ diameters upstream is the least pressure that exists upstream from the orifice, and the pressure at a point 8 diameters downstream is the greatest uniform pressure which exists below the orifice.

Where the pressures are obtained at the flanges, the upstream pressure is slightly greater than the minimum upstream pressure, and the pressure at the downstream connection is slightly greater than the least downstream pressure (in the vicinity of the orifice). The least pressure (near the orifice) exists about 0.4 pipe diameter downstream from the orifice.



Orifice meter installation for gas, pipe connections.

From the above facts it follows that the differential pressure between connections at the flanges is always greater for the same velocity through the same orifice than that obtained at the pipe taps, (one connection 2½ diameters upstream and the other 8 diameters downstream). In other words, the differential obtained between taps at the flanges is an exaggerated differential.

When taps are made in the flanges for connections the openings are usually located at 1 inch from the orfice. At points for full-flow connections a variation of an inch in the location does not produce a readable effect, for the reason that the pressures at these points and at points within a diameter in either direction are steady and do not vary enough to be read.

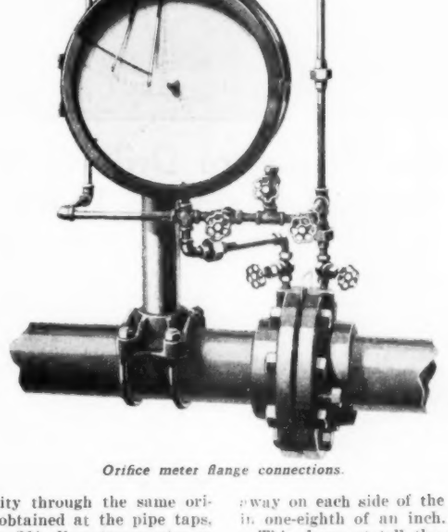
Friction Loss

The following table gives the friction loss expressed as a percentage of the total differential for full-flow and flange connections for various ratios of size of orifice to size of pipe.

Friction Loss in Percentage of Differential

Ratio X Diam. orifice Diam. of pipe	Full flow connections pct. loss	Flange connections pct. loss
0.15	100	96
0.30	100	89
0.45	100	75
0.60	92	57
0.75	80	40

At first glance it would seem that the flange connections are preferable, but it is a self-evident fact that with a definite rate of flow through an orifice the friction loss will be the same as long as the same orifice is used in the same pipe. The loss does not depend on whether the pressures are obtained 1 mile



Orifice meter flange connections.

away on each side of the orifice or within one-eighth of an inch.

This does not tell the whole story for it does not take into consideration the larger value of the coefficient for the full flow connections when using the same size of orifice in the same pipe.

The following table shows very clearly that a meter of a certain maximum

OTHER "PENBERTHY" PRODUCTS

Ejectors
Cellar Drainers
Oil Gages
Water Gages
Oil Cups
Grease Cups, Etc.

PENBERTHY PRODUCTS

Special High Pressure Automatic Injector

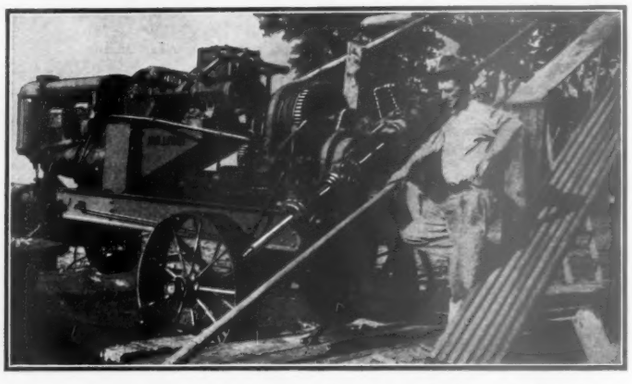
Owing to the increasing demand in the oil fields for injectors to operate on higher pressures, this high pressure injector is recommended where boilers are operated at pressures to 200 pounds.

Write For Catalog

PENBERTHY INJECTOR COMPANY
Established 1886

Canadian Plant:
WINDSOR, ONT., CAN.

1260 Holden Ave.,
DETROIT, MICH.



Angular Structure Drilling With Sullivan Diamond Drills

When you need to drill holes at an angle to secure accurate structure drilling results, the only practical method is a Sullivan Diamond Drill.

Suppose you want to intercept fractures through which oil may be seeping up from lower formation. Suppose the formation pitches, or dips, so that vertical drilling will break up the strata as it passes from one to the next?

With the Diamond Drill it is easy, since this machine is designed to drill and take core at any angle of the 360 degrees.

Can you do this with any other machine?

The photograph shows a Sullivan "CN" 1000 ft. mounted, Buda engine powered, hydraulic feed, Diamond Drill boring a hole at 30 degrees from the horizontal not far from Tampico, Mexico. In this work, boring in soft shale, the machine is doing rapid and accurate work, covering a high percentage of core.

Sullivan Mounted Diamond Drills are built in two sizes. "CN" 1000 ft. capacity and "N" 2000 ft., both removing 2-inch core. The Class "N" heavy duty machine has a special automatic chuck permitting the use of a grief stem for fish tailing and utilizing mud fluid when necessary. Send for new Bulletin 1580-B.

Use the Coupon

Send me free, Catalog 1580-B.

☐ Send me also free handbook, "Diamond Drilling for Oil."

Name .....
Street Address .....
City .....
Position .....

SULLIVAN MACHINERY COMPANY
88 E. Adams St., Chicago

range with full-flow connections will measure the same or slightly greater quantities at the same relative chart reading with a less friction loss than a meter of double its maximum range with flange connections. This table comparison between a 50-inch meter with 2½ and 8 diameter connections and a 100-inch meter with flange connections, each meter indicating a differential equal to half of its maximum differential range, when measuring air in a 4-inch line at a pressure of 50 pounds absolute.

50-inch meter, full-flow connections			
Diameter of orifice inches	Hourly orifice coefficient	Quantity cubic ft. per hour	Friction loss inches water
⅛	121.1	4,284	25
1½	519.9	18,390	25
2	1,019.4	36,070	25
2¾	2,4819	87,800	22

It is noted that a 50-inch meter at the maximum size of orifice with full-flow connections has approximately the same capacity as a 100-inch meter with flange connections. These ratios and percentages are true for the same relative capacities of meter.

Considerable has been said in regard to the merits of both types of connections relative to friction loss, capacities, etc. The facts may be briefly summarized in the following statements: The flange connections are more compact, and the meters indicate a higher differential for the same flow through the same orifice. Full-flow (pipe tap) connections are located at points where the pressures are uniform and steady; the range of capacity is 34 per cent greater from minimum to maximum size of orifice for the same pipe; the meters indicate a lower differential, requiring a smaller maximum range of meter for the same flow.

Friction loss depends solely on the rates of flow, size of orifice and size of pipe. The larger the orifice the less the friction loss which in turn means a lower differential and a meter of low maximum range regardless of the type of connections.

Pressure Loss

Whenever an orifice is placed in a line a loss of pressure is created. This loss varies from 40 to 100 per cent of the differential reading (see tables in preceding article) on the chart. For instance, if the differential reading is 54 inches the loss in pressure is not less than 21 inches of water or 0.8 pound and may amount to 54 inches of water or 2 pounds through the orifice depending on the location of the pressure connections and the size of the orifice. As the size of the orifice increases the proportion of pressure loss is due to friction compared to differential reading becomes less. For smaller sizes of orifices the lost head is equal or nearly equal to the differential pressure. On a vacuum line this loss creates a less vacuum at the well if the meter is placed between the pump and the well. Each 13.6 inches of water pressure amounts to 1 inch of mercury vacuum. If a vacuum pump pulling 26 inches of vacuum is placed on a line and the normal pressure loss through the line without an orifice is 4 inches of mercury head, the vacuum at the well would be 22 inches. If a small orifice is placed in this line and the reading is 54 inches of water (approximately 4 inches of mercury head) then the vacuum existing at the well is only 18 inches. In this case it will be noted that the orifice creates as much friction loss as the pipe line.

To overcome this difficulty meters having a maximum reading of 10 to 20 inches of water have been placed on the market. By using meters of these lower ranges the size of the orifice is increased, thereby decreasing the total differential pressure required to obtain an accurate reading. The proportionate friction loss as compared with the differential reading is likewise decreased.

The use of orifice meters having a differential range of from 60 to 100 inches on vacuum lines should be discouraged on account of the friction losses above stated. Any orifice meter having

100-inch meter, flange connections			
Diameter of orifice inches	Hourly orifice coefficient	Quantity cubic ft. per hour	Friction loss inches water
⅝	81.84	4,092	48
1¼	327.4	16,370	44
1¾	642.5	32,130	38
2¾	1,828.3	91,400	25

a maximum range of 10 inches will have a capacity sufficient to measure the flow through any vacuum line. The maximum capacity of a 10-inch orifice meter is 32 per cent of the maximum capacity of a 100-inch meter and 71 per cent of the maximum capacity of the 20-inch meter. However, the friction loss in measuring the same quantity of gas at the same relative reading on the 10-inch meter chart is less than 10 per cent of the friction loss created by using a 100-inch meter and less than 50 per cent of that for a 20-inch meter. For example, in the previous example with a 10-inch meter at the same relative chart reading of 5.6 inches the friction loss would be less than 5.6 inches of water pressure or 0.4 inch of mercury which would leave a vacuum of 21.6 inches at the well with 26 inches at the pump, a line loss of 4 inches mercury head and a meter loss of 0.4 inch of mercury. Although it is possible to obtain low readings from orifice meters having the higher ranges, the same percentage of accuracy in reading cannot be obtained, as when using meters of lower maximum ranges. For instance, the closest reasonable reading which could be obtained on a 100-inch chart is about one-half inch. The error for a 2-inch differential reading will amount to 12 per cent, whereas, on a 10-inch chart it is easily possible to obtain readings within 0.05 inch, which would amount to 1¼ per cent deviation for a 2-inch differential reading.

ORIFICE METER CAPACITIES

Capacity ranges of orifice meters when measuring through the same orifice and pipe and the hourly orifice coefficient is 100.

Maximum chart reading inches	Maximum capacity	Closet reasonable reading inches	Minimum chart reading* inches	Minimum capacity	Ratio of maximum to minimum flow
100	1,000	0.5	8.0	283	3.5
50	707	0.2	4.0	200	3.5
25	500	0.1	2.0	141	3.5
20	447	0.08	1.6	127	3.5
10	316	0.04	0.8	89	3.5
2.5	158	0 01	0.2	45	3.5

*Minimum chart reading corresponds to a 2½ per cent deviation in results for the closest reasonable reading.

Orifice Meter Capacities

The above table is self-explanatory and is given to illustrate the capacity relations of various ranges of gauges, also the fact that the ratio of maximum to minimum flow is the same regardless of the maximum differential range of the chart, when we use the same standard for determining the minimum chart reading which ultimately is the limit of ordinary vision. The maximum capacity for a 100-inch meter is twice as great as for a 25-inch meter, but it is likewise true that the minimum capacity of the 100-inch meter is also twice as large. The relative capacities are based on an hourly orifice coefficient of 100 for water. The relations shown are the same for any liquid, or any gas at a definite pressure.

When measuring gas in high-pressure lines where the loss of pressure is not an objectionable factor, and where large capacity is desired a 50 or 100-inch meter should be used. For measuring casing-head gas and all vapors and liquids when the line pressure is less than 50 pounds per square inch, meters having a 10 or 20-inch maximum differential range should be used.

For gas and air lines where the pressure is nearly atmospheric, a 2½-inch meter will give excellent results with an

The Holmes-Manley *Cracking* Process

Flexibility of Operation.

High Yield of Quality Gasoline direct from the Unit.

Fractionation and Condensation under Full Operating Pressure.

High Yield of Liquid Products with a minimum yield of fixed gas and carbon.

Low yield of Residue Fuel Oil of good Quality.

Relatively low Operating Temperatures.

Ease of Control.

Long Runs and High percentage of Operating Time.

Low Labor and Fuel Costs.

Address Inquiries to

THE TEXAS COMPANY

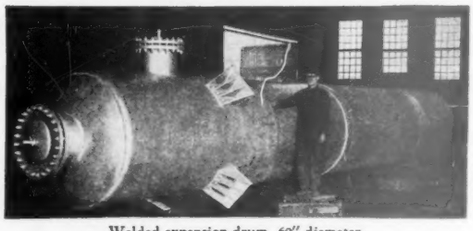
W. S. S. RODGERS

17 Battery Place, New York, N. Y.

Branch Office

816 Palace Building, Tulsa, Okla.

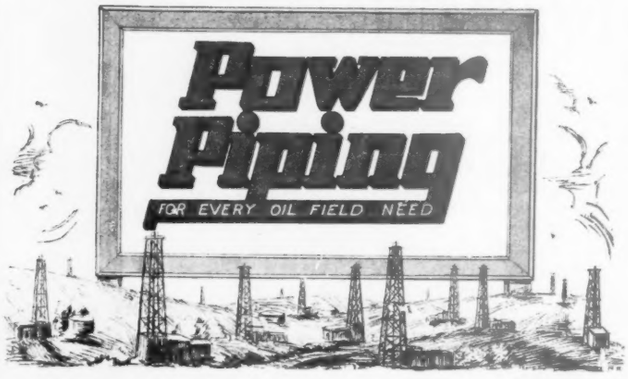
Years of Experience



Welded expansion drum, 60" diameter.
Tested to 300 lb. hydrostatic pressure.

YEARS of experience in serving power plants on small jobs and large, make it possible for *Power Piping* to promise speedy, dependable service at the lowest possible cost on any work involving design, fabrication or erection.

POWER PIPING CO. • PITTSBURGH



Eliminates by-passing arrangement
Plates changed in a few minutes
Orifice always centered in the line
Gas measured accurately—can't leak

Write for details

ROBINSON ORIFICE FITTING COMPANY
1435 SANTA FE AVENUE, LOS ANGELES, CALIFORNIA
CALIFORNIA DISTRIBUTORS:
Westcott & Greis, Inc., Los Angeles; Jensen Instrument Co., Los Angeles
MID-CONTINENT DISTRIBUTORS:
B & A Specialty Co., Tulsa, Houston; Westcott & Greis, Inc., Tulsa, Dallas

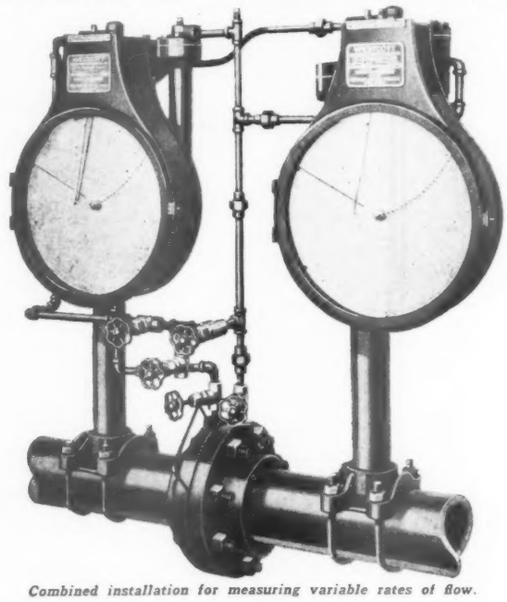
ROBINSON ORIFICE FITTING

LET UNCLE SAM DO IT — Why chase all over town every week? Let your postman deliver your Oil and Gas Journals to you. Subscribe now.

extremely low friction loss. This particular type of meter, which uses oil instead of mercury as a seal, is especially adaptable for the measurement of gases under pressures which do not vary appreciably from the atmospheric pressure. As noted, the range of this meter from maximum to minimum is the same as any orifice meter. The great advan age in this meter is that the pressure loss at the orifice required to produce a reasonable reading is very slight, not amounting to more than 1 inch of water pressure on the average.

Capacity Range of Combination Installation

When the range of maximum to minimum flow exceeds the capacity of a single meter, a combined installation of a 100-inch with a 10-inch meter increases the capacity 3¼ times. This type of installation is especially suitable for measurement at town border stations. Both meters are attached to the same taps in the line. Both record the flow until the differential exceeds 10 inches. The readings on the 10-inch meter are used in the calculations as they are more easily determined. Above 10 inches the records of the 100-inch meter are used. During the higher rate of flow above 10 inches the record on the 10-inch meter chart is continuous beyond the outside range of the chart as the meter is assembled with a long mercury seal connection between the two chambers of the meter so that the gas never passes through the meter, and the check valves are not required to operate until the differential exceeds 120 inches. The pressure is recorded on only one of the charts; 20-inch, 100-inch combinations are frequently used.



Combined installation for measuring variable rates of flow.

Checking Orifice Meters

The following paragraphs explain in detail the various items which should be considered in a complete check of an orifice meter installation or installations where differences in measurement have occurred. Some of these checks may seem superfluous, but it is well to assume that anything might occur to cause a discrepancy. Checks and tests are outlined as follows:

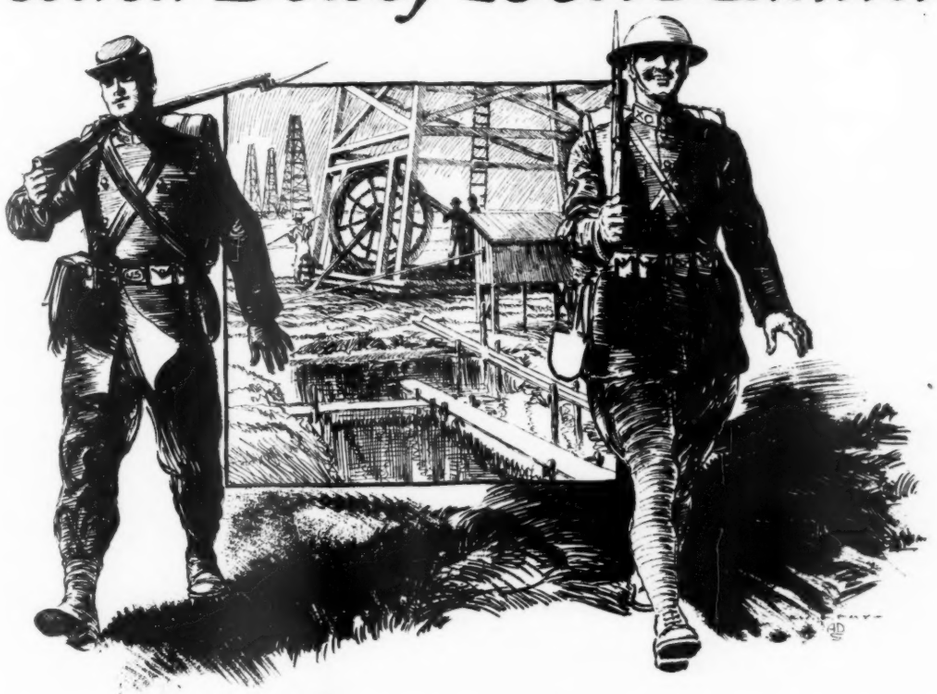
The meter should be examined to see that the pressure range of the spring used in the meter is the same as the pressure range indicated on the chart. The spring should be checked throughout its pressure range, especially at the range at which it is generally used. When testing pressure springs it is recommended that these springs be tested with an inspector's test gauge, the inspector's test gauge having been previously calibrated against a deadweight tester or, if of low range, preferably against a mercury column.

Meters should be checked for differential range throughout its limits, especially at zero under working-pressure conditions. Of course the meter setting should be examined for leaks or stoppages in the pipe between the main line and the meter, and to see that all parts are working freely in the meter. It is quite possible that a false differential may be created by a leak or a collection of dirt. Probably the most satisfactory way to check this sort of probability of error is to place a U-gauge or draft-gauge across the orifice with additional taps in the line at the same points that the meter taps are made. If this gauge indicates the same differential that the meter indicates, it is quite probable that there is not a leak or a collection of dirt sufficient to create a false differential.

The tap connections between the gauge lines and the main lines should be examined to see that the nipples or threads of the gauge-line connections do not project into the line. If they do it is quite possible that a false differential would be suspected. In the case of taps at the flanges, the installation should be examined to be sure that the center of the orifice is at the center of the line of pipe. It is quite possible that an error in differential will exist if the diameter of the orifice is a large percentage of the diameter of the pipe. For this reason it has been recommended that in no case shall the diameter of the disc be greater than two-thirds of the diameter of the pipe. This recommendation is also based on the fact that, if the interior of the pipe be rough, the results obtained would not be similar to those with the same orifice placed in smooth pipe. The distance from the center of the orifice to the center of the taps should be noted. A small difference in these distances does not produce any difference in the result when small orifices are used, but when large orifices are used quite a difference may occur. Probably the best way to test an installation to see that the flow of gas through the line is central with the pipe and the orifice, is to install pressure taps in the line or in the flanges opposite the taps which are used with the meter, and connect a draft gauge or a U-gauge across the pipe to the opposite taps. If a differential is produced it indicates that the pressure at the two taps is not the same, and therefore either the flow through the pipe is not central or there is some obstruction creating the difference. This test is simple and is probably the best test possible to determine whether the installation and measurement are affected by bends or regulators close to the orifice-meter setting. In some cases, regulators have been set within one pipe length of the orifice and have not produced any error. In other cases, regulators may be as much as three or four pipe lengths from the orifice and produce errors amounting to several per cent.

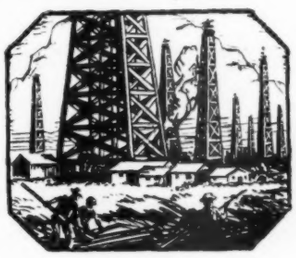
The diameter of the disc should be checked with a good micrometer, as well

When Dewey Took Manila



~oil was not necessary

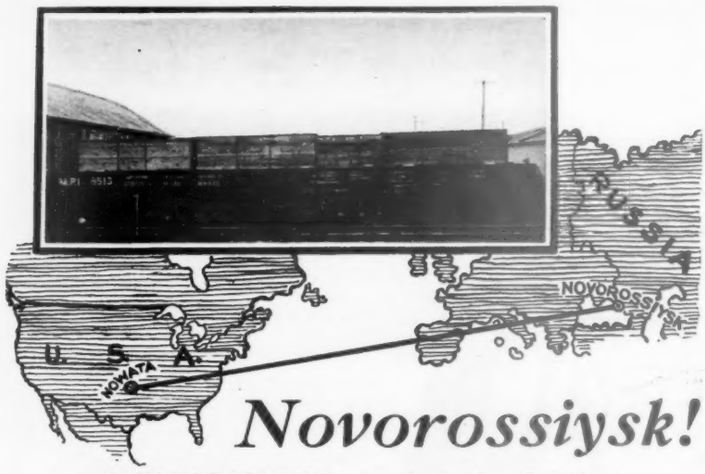
Today however, due to the great advancements made in science and engineering, the uses of Petroleum have become one of the bulwarks of the nation's defense. In the Army, Navy, and other branches comprising our national defenses, oil has been adapted to many purposes.



To meet the increased demands, good tools are absolutely necessary. ASCO STEEL has been developed with the sole purpose of producing a steel that will reduce costs of drilling. If you want tools that will stand heavy punishment use ASCO STEEL. We know the problems of the driller and can help you with the production of better tools.

"A Story of Steel and Oil" is a historical sketch of the Petroleum Industry. Write for your copy today.

ASCO STEEL
STANDS SUPREME
THE ANDREWS STEEL CO.
NEWPORT ◆ KENTUCKY



Novorossiysk!

TO NOVOROSSIYSK, principal city in the Government of Tehernomorsk, Caucasus, on the Black Sea, we have shipped a solid carload of Jensen Jacks. Nor is this by any means the first export shipment nor the last.

There is this about Jensen Jacks which seems to fill a definite requirement of foreign trade: They are dependable. They are not forever requiring repairs and parts, which is important anywhere and particularly so in far places.

We make Jensen Jacks to handle any volume of fluid through tubing of any size in wells of any depth. Some are counterbalanced; some are not. Some have a short stroke; some have long. Some are light; some are heavy. But one and all they have an absolutely straight lift and a smooth, easy action.

Inquire at any Frick-Reid Store or write us for Catalog.

Phone 221

JENSEN BROTHERS MFG. CO.

Nowata, Oklahoma

Export Office: 136 Liberty St., New York City

Sold by Frick-Reid Supply Co.

"A REAL OIL COUNTRY BELT"

O AND G

OIL GAS

Pumping—Drilling — Compressor
Double-Stitched

BELTS

RUGGED DURABLE

Not just A belt but a REAL POWER TRANSMITTER

ECONOMICAL

Manufactured by

IMPERIAL BELTING CO., Chicago

Sold by

OIL WELL SUPPLY CO.

In All Fields

as the diameter of the pipe. Quite frequently heavy pipe or casing is used and the coefficient of the orifice is based on pipe of standard diameter. A difference in the diameter of the pipe produces only small differences in the coefficient when the orifice is small, but for the larger sizes of orifice a considerable difference may occur.

The gravity of the gas at the various meters should be determined by the same apparatus, either a diffusion bottle or preferably a specific gravity balance. From experience, it has been found that there is a great possibility of differences being obtained by different diffusion bottles due to various viscosities of gas. If a balance is used, care should be exercised that the gas and air used should have the same temperature and that the gas should be dry, so that moisture will not be deposited on the bulb in the specific gravity balance. No doubt a number of errors which have been brought about have been due to moisture.

The average temperature of the gas flowing in each installation should be noted. A difference of 10 degrees produces a difference of 1 per cent in the results.

In some instances, the difference in results between meters apparently measuring the same gas may be due to water vapor in the gas or water contained in the gas in the form of moisture. If 1 cubic foot of water is contained in the form of moisture in 12,000 cubic feet of gas, the error produced will be 5 per cent. Quite frequently this occurs in measurement of gas from wells producing water; or in measurement of gas at the discharge of plants using steam for the removal of gasoline from charcoal absorbers. The same effect may be produced in oil wells, if oil be carried with the gas from oil absorption plants. In other cases, gasoline in the form of a moisture contained in gas measured between compression plants and oil absorption plants may create considerable error.

Another item which has been the subject of considerable controversy is the effect of pulsation on orifice meter measurement. It is undoubtedly quite possible to eliminate the effect of pulsation but apparently no set method of eliminating or determining the effect of pulsaton has been put into commercial practice at this time. Quite frequently the differences or discrepancies between meters have been blamed on pulsation, although the effect of pulsation has been negligible. In other words, pulsation has been blamed for a lot of differences which are not due to pulsation at all, one of the most frequent being the case of meters in the inlet and outlet of absorption plants. In many instances the differences in measurement are due to moisture entrained in the gas, and in other cases due to meters being installed too close to regulators or bends or valves in the pipe.

Pulsation and Vibration

In order to cover this subject thoroughly a distinction must be made between a vibrating differential pen arm and the pulsating flow which occurs through the orifice.

The differential pen arm will vibrate due to several causes such as, intermittent flow from a well, varying speed of a compressor or pump, nonuniform consumption by a drilling boiler, etc. In these cases the change in the rate of flow is slow enough to permit the differential pen arm to entirely or partially record the changes.

The pulsation which is produced by the rapidly changing rate of flow due to a compressor or pump, is usually so rapid that the differential pen arm indicates a uniform smooth record which may be greatly in error depending entirely upon the character of the wave motion.

Vibration of Differential Pen Arm

In endeavoring to decrease the vibration of the differential pen arm, the use of washers or the method of partially closing valves on the gauge lines, is not satisfactory as any very small leaks between the valves and the gauge will produce an erroneous reading. Washers may become partially stopped up and actually prevent the full pressure at the connection from being exerted on the mercury. Where it is impossible to place large chambers or reservoirs in the main line to eliminate the vibration, the vibration in the differential reading can be reduced most satisfactorily when the meters are equipped with small bushings which retard the flow of mercury from the high-pressure portion of the meter to the low-pressure portion of the meter, or vice versa. By using these bushings it is possible to automatically average the peaks and hollows of the differential reading, in cases of wells which flow by heads or where a well is supplying fuel to a drilling boiler or any machine at which the consumption of fuel is intermittent, and thereby reduce the time required in the office to estimate the average reading. Bushings installed in the mercury columns do not increase the accuracy of the gauge and do not decrease it except where the movement of the differential pen arm is greatly retarded requiring more than three minutes to cover the range of the chart. The results obtained from charts where the differential record is averaged in this way will be the same as would be obtained by averaging each period by inspection.

Even though the vibration is eliminated, pulsation may exist and the layout should be tested as prescribed in the following article if there is a possibility of error due to rhythmic pulsation through the orifice. It is almost a certainty that the differential reading is in error if the static pen arm vibrates rapidly.

Pulsation

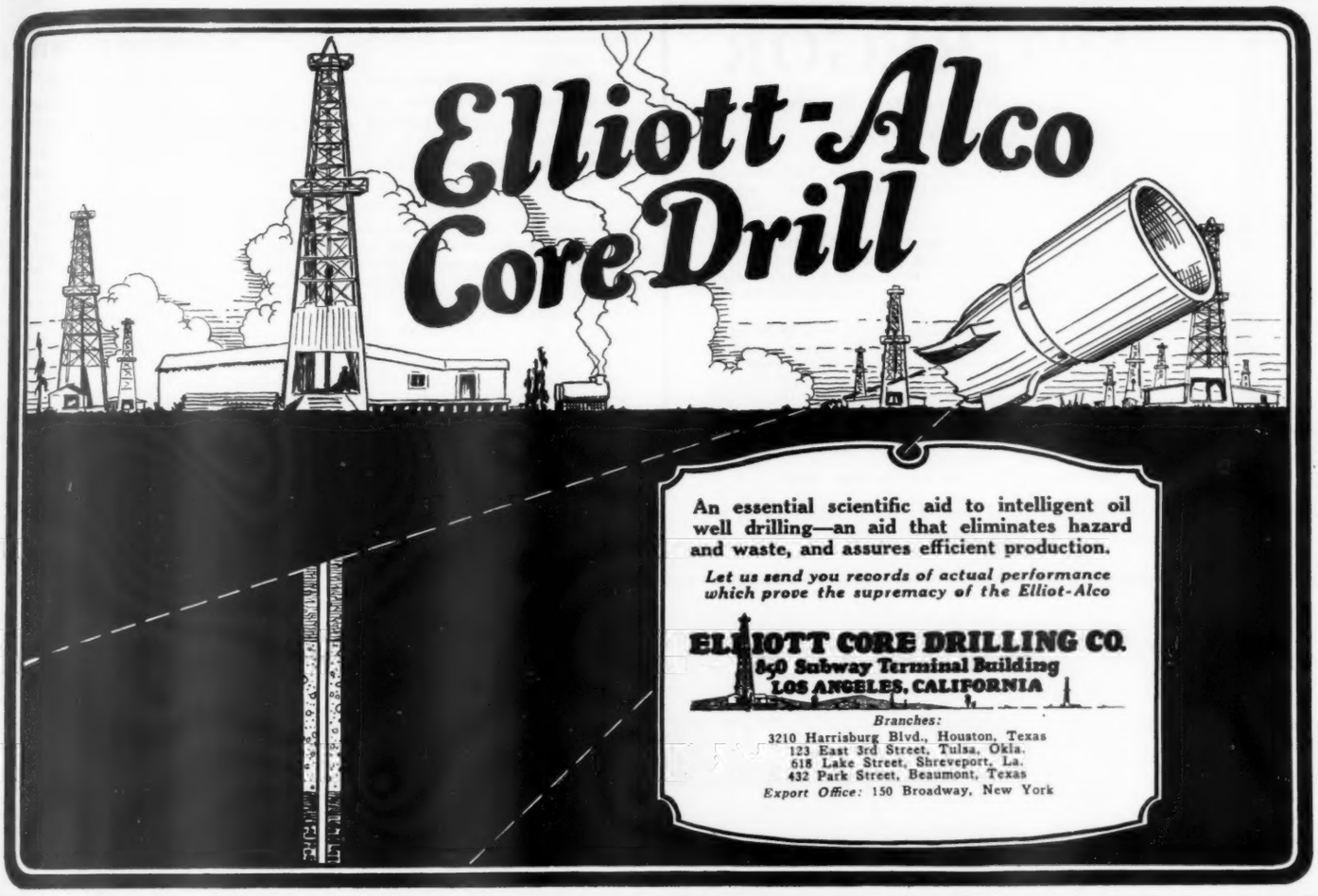
A great many people believe that when they have a pulsating volume of gas or liquid to be measured, it is only necessary to install "deadeners" or pinch valves in the gauge lines to the differential gauge in order to obtain accuracy. This is erroneous. Simply because one kills the pulsation in the lines leading to the high and low pressure side of the differential gauge does not mean that they have stopped the pulsation of the fluid passing through the orifice. It is not practicable to measure pulsating flow by orifice meters or displacement meters. It is as unreasonable as to attempt to weigh a person jumping around on a penny-in-the-slot weighing machine.

Pulsations due to fluid and imperfect regulators can be eliminated by separators, drips and mechanical repairs. Where pulsation is caused by regulators or fittings it is not a difficult matter to move the regulators or fittings far enough back of the meter so as not to cause counter currents, eddies, or pulsations.

Compressors are the greatest producers of pulsation. Of course, a very slight pulsation may not have any material effect on the accuracy of the orifice meter, but it is best to have none. To obtain accuracy where the gas pulsates badly, one should eliminate the pulsation or move the orifice meter to another location. To eliminate pulsation it is necessary to install tanks, or a greater friction loss on the outlet side of the meter.

It has been thought that the effects of pulsation might be considerably lessened, if not completely eliminated, by the use of discs in the line on the downstream side of the meter, the size of discs being such that they will produce a differential of approximately 100 inches of water.

There is another problem which occurs in the calculations of charts from flowing wells. The use of vibration bushings in the meter, or the contraction of the passage between the high and low chambers of the meter, frequently reduces the range of vibration of the differential pen arm, but does not correct the meter. The reading produced on the chart will be an average reading, rather than maximum and minimum readings. Probably the most accurate method of calculating these charts is to obtain a quantity which would be the quantity obtained from the average low reading, and calculate the quantity which would be ob-



An essential scientific aid to intelligent oil well drilling—an aid that eliminates hazard and waste, and assures efficient production.

Let us send you records of actual performance which prove the supremacy of the Elliot-Alco

ELLIOTT CORE DRILLING CO.
850 Subway Terminal Building
LOS ANGELES, CALIFORNIA

Branches:
3210 Harrisburg Blvd., Houston, Texas
123 East 3rd Street, Tulsa, Okla.
618 Lake Street, Shreveport, La.
432 Park Street, Beaumont, Texas
Export Office: 150 Broadway, New York

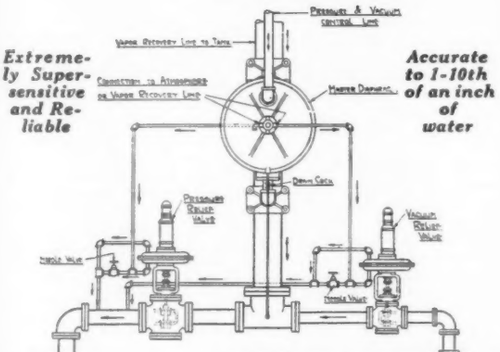
All Tank Vapors Now Can Be Completely Recovered With the

NEILAN VAPOR RECOVERY REGULATOR SYSTEM

(Patents Pending)

Extremely Supersensitive and Reliable

Accurate to 1-10th of an inch of water



The system is very simple and reliable. Once placed in operation, there are no further adjustments to make and it will operate several years without repairs. The materials used resist corrosion from hydrogen sulphide gas and other sulphur compounds. The valves will not chatter. No reducing regulator is required on the line to vacuum relief valve, for pressures up to 100 pounds. Descriptive circular on request.

The Neilan Vapor Recovery Regulator System consists of a pressure relief valve and a vacuum relief valve, both operated from pilot valves connected to a master diaphragm. It will maintain atmospheric pressure in tanks and will not vary more than 1/10th of an inch of water; regardless of pumping in, pumping out, or expansion and contraction due to temperature changes.

The pressure relief valve will permit vapors to pass into the vacuum line at atmospheric pressure. The valve opens on the slightest increase in pressure above atmosphere, and will be fully open at 1/10th of an inch water pressure.

When pumping out of tanks the vacuum relief valve opens at the slightest vacuum and allows natural gas to pass into the tank.

"You Can Be Sure of Neilan Products"

NEILAN, SCHUMACHER & CO.
641-651 Santa Fe Avenue, Los Angeles, California
Branch: 327 East Fourth St., Tulsa, Okla.
P. H. Wilkinson, Manager

REPRESENTATIVES

Maintenance Engineering Corp.
2000 Harrington Street
Houston, Texas

Pelican Well Tool & Supply Co.
Shreveport, La.

McGREGOR

"The Working Barrel That Works"

Over sixty thousand now in use from Pennsylvania to Argentine and from Oklahoma to India wherever oil is produced.

No Barrel can compete with the McGregor in price and saving. It comes with the barrels, valves, valve stem all complete at a price slightly more than what the old style Barrel would cost. Pumps as fast as old style barrels that are attached to the tubing.

The only pulling done when you have a McGregor in use is the rods as the complete Barrel is fastened to the rods and comes out when they are pulled. TUBING PULLING is done away with as far as the Working Barrel is concerned. Made for all size tubing. Use "Mac" Ball and Seat.

See your dealer or write us for circular

In ordering parts refer to these letters

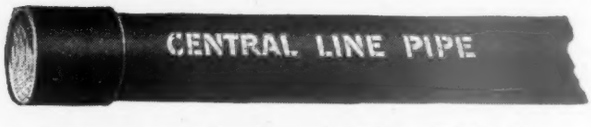
McGREGOR WORKING BARREL CO., Inc.
Sole Manufacturers
BRADFORD, PENNA.

Gott Water Can or Gottakool

Built to last—you will always be assured of a fresh supply of pure water, when you have a GOTT. Made in 1½, 3, 5 and 10 gallon sizes. Order now from your supply store.

H. P. GOTT MFG. CO.
Winfield, Kansas

"Central" Oil Country Tubular Goods



Large gas companies, after using "Central" Pipe, have commented upon its uniform lengths, perfect roundness, and careful beveling. These sterling qualities in "Central" reduce construction costs by speeding up the field work and, in addition, insure a tight durable line.
For complete satisfaction all around use "Central" Pipe on your next job.

CENTRAL TUBE COMPANY

General Offices—First National Bank Bldg.
PITTSBURGH

Representatives in the Oil Fields
Mid-Continent: Allen, Sproull & Allen, Burk Burnett Bldg., Fort Worth, Texas
California: E. C. Saul, Monadnock Bldg., San Francisco, California.
DISTRIBUTORS: Taubman Supply Corporation, Tulsa, Oklahoma, and branches; Dunigan Tool & Supply Co., Breckenridge, Texas, and branches; Putnam Supply Company, Putnam, Texas, and branches; Louisiana Iron & Supply Co., Shreveport La., and branches; Petroleum Equipment Co., Los Angeles, California, and branches; American Supply Co., Mexia, Texas; Standard Supply Co., Inc., Wichita Falls, Texas

tained from the average high reading, the true quantity being the average of these results.

Deviation From Boyle's Law

A problem of high-pressure measurement which has apparently caused some uneasiness is deviation from Boyle's law. All tables for multipliers and for pressure extensions for orifice meter calculations are based on the assumption that natural gas follows Boyle's law in that the volume is inversely proportional to the pressure. This is not strictly a fact and the unfortunate feature is that the deviation varies with the constituents in the gas. It is quite possible to make a very good determination of this deviation by simple calculation when the constituents of the gas are known, and the fact can be used in making a check between meters. Quite a number of articles have been written on this subject and the reader's attention may be called to an article written by P. M. Biddison in Natural Gas, in June, 1924.

Deviation in Flow Due to High Ratio of Differential Pressure

In all of the calculations relating to flow of fluids through orifices, the general formulas and expressions of flow have been simplified and are based on the assumption that the difference between the upstream pressure and the downstream pressure is small when compared with either the upstream or the downstream pressure, or that the ratio of the differential to the pressure is small.

In measuring fluids which are nearly incompressible, such as water or oil through an orifice meter, there is practically no change in the density as the fluid passes the orifice. The quantity is correctly represented by the formula $Q = C\sqrt{h}$.

When measuring compressible fluids such as air, natural gas, manufactured gas, hydrogen, etc., the density of the fluid is changed. The quantity flowing is based on the velocity which is obtained by using the formula

$$V = C\sqrt{2gH}$$

where H is the differential expressed in feet head of flowing fluid. The value of H varies and depends on the line pressure.

Theoretically it is assumed that the line pressures at both connections are the same but this is not true due to the differential created by the orifice. As the ratio of the differential to the line pressure increases, the greater will be the difference in values of the differential in feet head of flowing fluid when expressed in terms of the upstream and downstream pressure.

All of the published coefficients were based upon experimental data obtained by using orifices in which the ratio of differential to pressure was low. These coefficients should be used in a similar manner in actual practice and should not be used under exceptional conditions without the use of multipliers or factors, which cannot be furnished at present. It is recommended that the average reading on the differential gauge in inches of water should not exceed the value of the static pressure in pounds per square inch absolute for any type of connections in order to obtain results without the use of multipliers, that is, the average maximum differential pressure should not exceed 5.0 inches at 20 inches mercury vacuum (5 pounds absolute), 25 inches at 10 pounds (24.4 pounds absolute), etc.

NEW MEXICO PERMITS

There were 903 oil and gas permits issued by the Santa Fe, N. Mex., United States Land Office during the fiscal year ended June 30, according to A. M. Bergere, the register in charge. A total of all kinds of permits totaled 2,025. He reports that the unappropriated and unreserved lands of the district on June 30 was 4,995,353 acres, of which 4,740,924 acres was surveyed and 254,449 acres unsurveyed.

SURVEY OF REFINERIES IN FOREIGN COUNTRIES

(Continued from Page 88)

kalan Susu, the port of the refinery. Established in 1892, the Pangkalan refinery has been enlarged from time to time; having a present daily capacity of 10,000 bbls. In addition to the pipe lines from Perlak, there are two 6-inch, one 4-inch, and one 10-inch pipe line from the refinery to the terminal at Pangkalan Susu. At this latter point is a can factory, a fueling station, and storage facilities. The refinery is chiefly used for the production of gasoline and kerosene. Crude oil from the northern Sumatran fields is very rich in light distillates, yielding 30 per cent or more of high-grade gasoline, in addition to 40 per cent or more of excellent kerosene. No recent figures are available that show the gasoline and kerosene output of these two refineries. Based on the available crude oil, an estimate for 1921 places the gasoline at about 40,000,000 gallons and the kerosene at 50,000,000 gallons.

The other two refineries operated by the Batavian Co. lie in the Palembang district, in the southeast portion of the island. One is at Pladjoe and the other at Bagoeskoening, both points along the Moesi River, a few miles below the port town of Palembang. These two plants constitute a complete refining unit, with a daily capacity now said to exceed 10,000 bbls. Gasoline, kerosene, lubricating oils, and greases are manufactured. The crude oil is either piped to the refineries or brought down the Moesi River in barges from Kajoe, an 8-inch pipe line terminus from the north Babot Field. Two 4-inch pipe lines, 87 miles long, connect the Pladjoe plant with the Kampong Minjak Field. Still another pipe line brings crude oil from the Melamoen district, a distance of 141 miles.

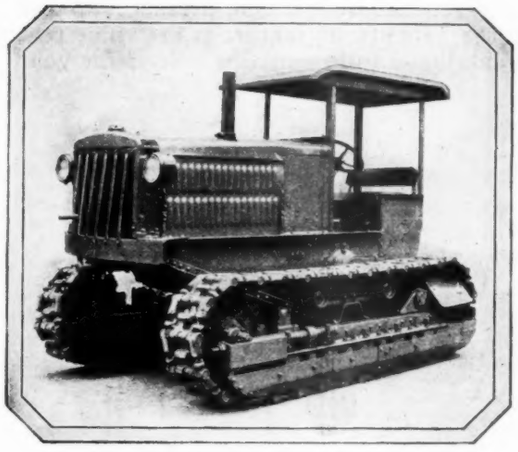
In 1921, the last year for which information is available, the following quantities were exported from Palembang: Gasoline, 38,000,000 gallons; kerosene, 22,000,000 gallons; lubricating oils, 660,000 gallons; and lubricating greases, 389,000 pounds; besides limited quantities of crude oil, fuel oil, and asphalt. The output of these refineries, largely exported as indicated above, finds a ready market in the Orient, Europe, Africa, and Australia. In addition to a probable increase in the production of these two refineries since 1921, the foregoing quantities will be further increased during 1927 by the output from the new refinery at Soengei-Gerong, in the same district.

Soengi-Gerong lies along the Moesi River, on the opposite bank from Pladjoe. The official opening of this refinery took place on December 17, 1926. Built by the Dutch Colonial Co. at a cost of approximately $4,000,000, this plant will ultimately draw its supplies of crude oil from seven newly granted concessions in the Palembang district. At present, however, crude oil is only being produced in the Talang Akar concession, where some 40 wells are in actual operation. An 81-mile pipe line, for the most part underground and passing under three rivers, carries crude oil from this concession to the refinery. The installation at Soengei Gerong is thoroughly in every respect, the latest design of cracking process being used. The initial capacity of the plant is 4,000 bbls. of crude oil per day, the principal products being gasoline and kerosene. In addition to the modern boiler and power installation with steam and electrical distributing lines, water-pump facilities, and ample storage tanks, the plant equipment includes a special installation for the use of liquid sulphur dioxide in the manufacture of high-grade refined oils.

Owing to the low, swamp character of the whole Palembang region, difficulties were encountered in the building of this plant. An interesting appreciation of some of the work involved in a tropical installation of this kind can be had from the following extracts from the principal address delivered at the official opening celebration at Soengei-Gerong.

"The work executed here probably represents a record as to speed with which the construction has been completed. The entire installation, including storage tanks, pipe lines, and all mechanical

Tractors Demand a Lot of Their Bearings



Pulling graders or farm machinery hour after hour and day after day puts a real strain on tractor bearings. It takes good babbitt to hold up and keep on going. Genuine "A" is generally recognized as the finest babbitt for all excessive bearing loads.

Hoyt's Great Eight includes a Babbitt Metal for every purpose, made especially for that particular type of work. Send for your copy of "Babbitt Metal Data", a booklet which contains a wealth of valuable information. It is yours for the asking.

HOYT'S GREAT EIGHT

Genuine "A" Babbitt	*Oil Engine Babbitt*
Eagle "A" Babbitt	*Gas Engine Babbitt*
Trojan Babbitt	*Faultless Babbitt*
Electric Railway Babbitt	*Standard No. 4 Babbitt*

HOYT METAL CO., St. Louis
NEW YORK CHICAGO DETROIT

Address
Department F

Genuine "A" is the finest babbitt that money can buy, and yet it costs no more than any other good babbitt. In the long run, it is a real economy.

HOYT Babbitts

Economy in equipment is entirely a matter of long life with low maintenance cost.

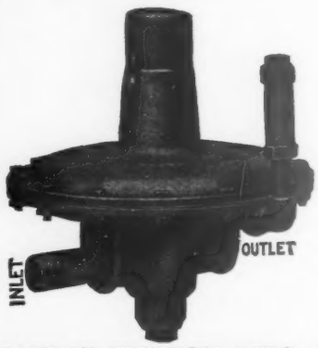
Specify Sheffield
Copper Steel Sheets

SHEFFIELD STEEL CORPORATION
KANSAS CITY, MO.

New Billet Reinforcing Bars . . Rail Steel Reinforcing Bars . . Blue Annealed Sheets . . Merchant Steel Bars
Merchant Iron Bars . . Bolt and Nut Products . . Sucker Rods . . Pull Rods . . Track Spikes . . Forgings

FULTON HOUSE-SERVICE REGULATOR

Equipped with a highly efficient spring valve which automatically reduces high intake pressures to any desired degree. Its strong feature is the valve seat which our catalogue fully explains. Send for your copy today.



CHAPLIN-FULTON MFG. CO.
28-36 Penn Ave., Pittsburgh, Pa.

MYERS PUMPS FOR EVERY PURPOSE

We are manufacturers of an extensive line of Well House and Cistern Pumps, Hand and Power Water Systems for homes, farms, country estates, public and private institutions; Self-Oiling Power Pumps and Working Heads for oil and gas fields, mill, mine or factory, railroads, highway and general contractors. Ours is an established line with over fifty years of pump building experience behind it to guarantee quality and dependability.

If you have water problems to solve, either in a large or small way, write us for information and catalog.

TAME OFF YOUR HAT TO THE MYERS LINE
PUMPS FOR EVERY PURPOSE
HAY TOOLS & DOOR HANGERS

THE F.E.MYERS & BRO.CO. Ashland, Ohio.
MANUFACTURERS FOR OVER FIFTY YEARS OF MYERS "HONOR-BILT" PUMPS FOR EVERY PURPOSE • WATER SYSTEMS • HAY UNLOADING TOOLS AND DOOR HANGERS

Preferred Opinions

The Oil and Gas Journal—with its bright yellow cover—on your desk or in your home indicates that your opinions regarding the Oil Business are to be given preference.

Be among the best informed oil men. Always renew your subscription promptly.

The Oil and Gas Journal
Tulsa, Okla.

SKINNER Clamps stop leaks

Send for Catalog
M. B. SKINNER CO., 562 Washington Boulevard, CHICAGO

equipment, together with the housing and recreation facilities for the employes, was completed in the brief period of only 18 months. Before any construction could be begun, however, we were obliged to fill in this large tract of land with sand from the river bed. This work involved the displacement of nearly 800,000 cubic yards. In order to protect this fill against damage from the river it was further necessary to install a concrete sheet piling bulkhead along the edge of the river. I clearly recall coming here for the first time some nine years ago and finding a territory consisting entirely of jungle and swamp in which only crocodiles, monkeys and mosquitoes thrived. More recently, two years and a half ago, this same jungle was only partially cleared away. Upon my last return several days ago I could scarcely believe my eyes, so great were the changes that had taken place. We now have here, in addition to the refinery, a complete small community with agreeable practical houses in which a large number of families are established. Moreover, we have a clubhouse, a swimming pool, a complete water-supply system, and a fully developed sanitary arrangement."

The Dutch Colonial Petroleum Co. was founded at The Hague in 1912, with head offices in the Petrolia Building in that city. While controlled by a Dutch board of directors, American capital has been drawn upon. The finished products from this company's refineries in the West Indies are marketed by the Standard Oil.

JAVA

Of the four refineries on the island of Java, two are controlled by the Batavian Co. Of these, one is at Wonokromo, about 5 miles south of the port town of Sayabura, Sayabura being in the eastern part of Java, off the Straits of Madura. The other of these two refineries is at Tjepoe, some 40 miles south and east of the port of Rembang, farther to the west from Sayabura and along the northern coast. These two plants were originally established by the Dordtsche Petroleum Maatschappij, the former in 1890 and the latter in 1894. This company was brought under the control of the Batavian Co. in 1911.

The refinery at Wonokromo is now said to have a daily capacity of 2,000 bbls. According to production figures furnished to the Dutch East Indies Government, the average daily production of the three contributing fields amounted to a total of 1,200 bbls. during 1925. The actual consumption of Wonokromo probably averages about the same. The crude-oil supplies arrive in tank cars from various concessions in the Sayabura district. Storage tanks for both crude oil and refined products are provided, the main product of the refinery being a low-grade kerosene, most of which is marketed locally. A small amount of gasoline, of rather poor quality, is also produced. Lubricating oils are made and sold to the sugar and rice mills of Java, as well as to the automotive trade, though here again the quality is inferior.

The refinery at Tjepoe is a complete plant, with a capacity said to be 6,000 bbls. per day. It is known that in times past the actual production of this plant was frequently limited by an insufficient supply of crude oil from the company's available leaseholds. More recently, however, the Batavian Co. has increased the number of its leases in Java, to the end that a more satisfactory supply of crude oil is now assured. According to reports submitted to the Dutch East Indies Government for 1925, the average combined daily production from the Batavian Co.'s holdings in the Palembang and Semarang districts, both tributaries to Tjepoe, amounted to 9,500 bbls. Much of the crude oil handled at this refinery carries a high-grade paraffin, which is especially suitable for the manufacture of candles, a candle factory being operated by the company in conjunction with the refinery. Gasoline and kerosene, both of a good grade, are the principal products manufactured at Tjepoe.

For some years the Dutch Colonial Co. has operated a small refinery at Kapoean, about 5 miles southwest of Tjepoe. Owing to the limited production of crude oil

Accurate information concerning every activity of the Petroleum Industry is becoming more and more valuable. It is absolutely essential to the man who wishes to make a success in the Oil Business.

Knowing these facts, and realizing the possibilities of quick developments of importance to you, The Oil and Gas Journal takes every means to make sure that you will receive accurate information every week, in detail, with maps, charts, well-logs, technical articles, surveys, tables, designs, pictures, etc.

The members of the Editorial Staff are working for you always. They never stop. They are on the alert constantly, seeking fresh news, verifying reports, compiling facts, investigating rumors, etc., so that you will be among the VERY FIRST to receive the benefits of new developments or expansions.

Keep in close touch with activities. Have The Oil and Gas Journal delivered to your home or office every week and always renew your subscription promptly.

Then you will have complete, authentic, valuable oil news at all times.

The Oil and Gas Journal
Tulsa, Okla.
$6.00 for 1 yr. $3.00 for 6 mo.

Treating Plant Quickly and Cheaply Installed

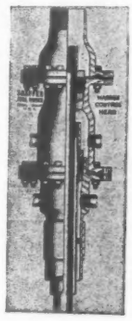
Using equipment already on the lease, you can soon arrange a plant for treating any quantity and any variety of "cut oil" with—

Tret-O-Lite

There is no heavy investment. Sufficient treating capacity for flush production does not penalize the operator at a later period.

WM. S. BARNICKEL & CO.
St. Louis, Mo.

Tret-O-litE



WARREN CONTROL HEAD or BLOW-OUT PREVENTER

Invaluable in Wildcat and all High Pressure Territories

The Warren Control Head is a simple, yet highly efficient device which should be on every well in high pressure territory. It is invaluable in wildcat territory, as unexpected gas pockets may be encountered at any time, and with this flanged preventer, a shut-off connection can be made either before or after the well has gone wild.

This control head has been in use for some time on many wells in Ventura, one of the high-pressure gas fields on the Pacific Coast, and not a single well equipped with it has ever gone wild.

Complete descriptive literature on request.

SHAFFER TOOL WORKS
Brea, California, U. S. A.
Distributed By
Robt. N. Atmore Co., Tulsa, Okla.
Robt. J. Miller Co., Houston, Texas

from this company's holdings in Java, however, and to certain difficulties in connection with increasing its leaseholds there, the refinery at Kapoean has been operating at only about one-fifth of its full capacity of around 1,000 bbls. Should no additional producing territory be obtained in the near future, it is the intention of the Dutch Colonial Co. to cease operation entirely at the Kapoean refinery.

The last of the four refineries in Java is located at Klantoeng, near the Klantoeng-Sodjomerto concessions in the Semarang district, farther to the west from Tjepoe and Karpoean. This concession, as well as the refinery, is owned by the Algemeene Petroleum Co. The output is relatively small, the principal product being a limited quantity of kerosene, which is distributed locally. The residue is used as fuel at the plant or sold locally when a surplus exists. In 1920, the last year for which production figures are available, a otal of 2,600 bbls. were handled.

AUSTRALIA

From report by Trade Commissioner E. G. Babbitt, Sydney.

Australia, though without domestic supply of crude petroleum, has at present two refineries: The Commonwealth Oil Refineries (Ltd.), located at Laverton, Victoria; and John Fell & Co. (Ltd.), located at Clyde, New South Wales.

The Commonwealth Oil Refineries (Ltd.) is capitalized at £850,000, the shares being divided between the Commonwealth and the Anglo-Persian Oil Co., the government retaining the controlling interest by two votes. It is incorporated under the ordinary company laws of the State of Victoria. The plant equipment is in part modern, though the original equipment is reported to have been purchased second hand from the defunct British-Australian Oil Co. The company obtains 90 per cent or more of its supplies of crude oil and other imports from the Anglo-Persian Oil Co.'s holdings in Persia. Some gasoline has been purchased direct from the United States in 45-gallon drums.

The Commonwealth Oil Refineries produce three grades of gasoline, sold under the trade name of "C. O. R.," kerosene, and fuel oil. The present annual output is reported to be between 6,000,000 and 6,500,000 gallons of gasoline, 12,500,000 gallons of kerosene, and 15,000,000 gallons of fuel oil. No change is contemplated in the present ownership of the company, though various rumors have been circulating as to increased facilities, both refining and distributing, in order to extend the sale of C. O. R. products in competition with important products.

The announcement has recently been made that a refinery, with oil storage and distributing center, will be established at Auburn, New South Wales, on 60 acres fronting on the Paramatta River, this to be the headquarters for New South Wales. Rumor also indicates new plants at Perth, in Western Australia, at Adelaide, in South Australia, and at Brisbane, in Queensland. It is doubtful, however, whether this company will take immediate steps toward additional refining operations. It is believed more likely that increased supplies of gasoline will be purchased from the Anglo-Persian Oil Co.

When the Commonwealth Oil Refineries started operations the sale of petroleum products was largely in case goods. It has since developed into bulk distribution through retail pump sales. Distribution from its refinery has been found so difficult and costly that the states, other than Victoria, have been largely neglected. On July 29, 1926, the Prime Minister (Mr. Bruce) stated in the Federal House of Representatives that "It is not at present proposed to duplicate the plant of the Commonwealth Oil Refineries (Ltd.), in Victoria, or to establish refineries in other states." At that time the capital of the company was increased from £750,000 to £850,000, in order to engage in bulk distribution. As the operations to date have not been profitable it is likely that additional capital will be required soon. The requirements for the proposed

Ajax Bull Ropes

"Strength in Every Length"

E. A. G. LAWSON, President Reg. U. S. Pat. Off.

Mid-Continent Sales Distributors:
Bisett & Brown
1007 Jones Street
Fort Worth, Texas

Warehouse Representative:
H. D. Hedrick
Tulsa Transfer & Storage Co.
Tulsa, Okla.

Ajax ropes are carried in stock by the North Texas Supply Co., Cross Plains, Tex.; Rex Supply Co., Sour Lake, Tex., and Mid-Continent Supply Co., Fort Worth, Tex.

Oil Well Valve Cups

"LUBRIKUPS" are manufactured in three grades, Hard, Soft and Special Soft. Each grade has labels with words Hard, Soft and Special Soft printed thereon.

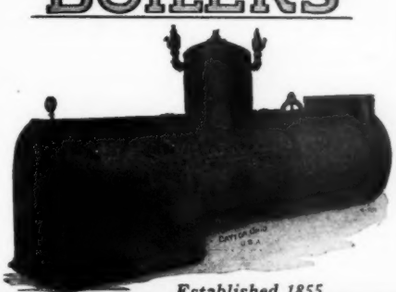
"LUBRIKUPS" Hard used in deep wells where pressure is sufficient to expand.

"LUBRIKUPS" Soft for wells of depth up to 2000 feet where cut oil exists.

"LUBRIKUPS" Special Soft for wells of depth to 500 feet.

LUBRIKUP COMPANY, INC.
WILLIAMSPORT, PA., U. S. A.

BROWNELL High-Pressure Oil Country, ASME BOILERS



Established 1855

BOILER VALUES

are determined by design, workmanship, strength, economy and durability. Brownell Oil Country Boilers embody these essentials.

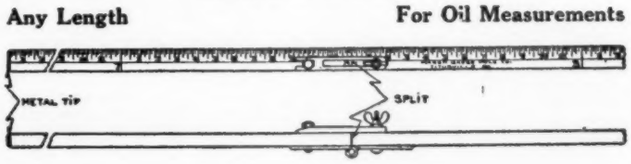
Domestic Distr. Dunigan Tool & Supply Co., Breckenridge, Texas

Export Division, Oil Field Machinery Co., 90 West St., New York, N. Y.

Get bulletin B-7
THE BROWNELL COMPANY
Dayton, Ohio, U.S.A.

GAUGE POLES

Any Length — For Oil Measurements



"MARSH-JOINT"

For sale by oil country supply houses or furnished promptly by the factory at Titusville, Pa.

Correspondence Solicited

MARSH GAUGE POLE COMPANY
TITUSVILLE, PA.

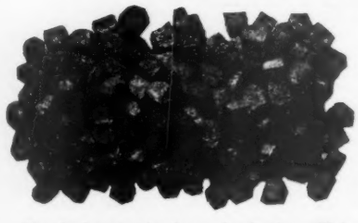
RYERSON
IMMEDIATE SHIPMENT FROM STOCK
Bars, Plates, Rivets, Tool Steel, Shapes, Sheets, Bolts, Welding Rods, Structurals, Tubes, Wire, Concrete Reinforcing, Rails, Pipe, Turnbuckles, Alloy Steel, Ascoloy, Small Tool, Machine Tools, etc.
Write for the Ryerson Journal and Stock List.
JOSEPH T. RYERSON & SON INC.
Chicago Milwaukee St. Louis Cincinnati Cleveland
Detroit Buffalo New York Boston
Tulsa Office: 410 Atlas Life Bldg.
STEEL
Houston Office: D. S. Mair 220 Main Street

Natural Gas Financing
G. E. BARRETT & CO.
Incorporated
120 Broadway New York

CARBON (BLACK DIAMONDS)
FOR DIAMOND CORE DRILLS

—IMPORTERS—
INDUSTRIAL DIAMONDS
—MANUFACTURERS—
DIAMOND POINTED TOOLS FOR ALL MECHANICAL PURPOSES
WRITE OR WIRE FOR CATALOGUE AND FULL PARTICULARS
THE DIAMOND DRILL CARBON CO.
61 PARK ROW, NEW YORK, N.Y. CABLE ADDRESS, CREDOTAN, N.Y.

HARRY A. CAMPBELL F. LEE STEWART
NATIONAL PETROLEUM ENGINEERING COMPANY
ENGINEERS AND GEOLOGISTS
ATLAS LIFE BUILDING
TULSA, OKLAHOMA
APPRAISALS
REPORTS, COMMERCIAL AND TAX
SURVEYS
ESTIMATES OF OIL RESERVES

U. S. INDUSTRIAL DIAMOND CORP.

475 Fifth Ave., New York
Importers of all varieties of Industrial Diamonds
Carbon (Black Diamond) and Bort (Crystalline Diamond) for Diamond Core Drilling
Best shapes and qualities always in stock.
Parcels for examination and selection will be sent on request to reliable firms.

STEEL PLATE CONSTRUCTION
Steel Oil Storage Tanks, Condensers, Stills, Refinery equipment of every kind, Fabricated and Erected
RITER-CONLEY COMPANY
General Offices—Pittsburgh, Pa.

New South Wales plant are estimated at £500,000.

For the year ending June 30, 1925, the operations showed a deficit of £53,813. This was made up by contributions from the shareholders—the commonwealth government and the Anglo-Persian Oil Co. The year ending 1926, however, showed a net profit of £3,618, the plant having been worked to its full capacity during that year.

The majority of shares in the John Fell & Co. (Ltd.) are reported to be held by the Fell family, the authorized capital being £300,000, of which £163,653 is paid up. The preferred shares amount to £41,625. The plant equipment is for the most part modern, comprising the first unit of the Dubbs cracking process, operative in Australia. Crude oil is obtained from Tarakan, British Borneo, and is understood to be supplied through the British Imperial Oil Co., which brings it from Borneo in tankers and delivers it to the refinery in lighters. The company also imports lubricating oils for blending, as well as gasoline to supplement their own production. The refinery at Clyde produces motor spirit, power kerosene, and lighting kerosene. A negligible quantity of fuel oil is also produced. A monthly crude consumption of 900,000 gallons is reported, presumably imperial gallons.

The company has its own distributing organization, operating tank cars and motor vehicles. Eighty-five per cent of its sales are in bulk, with the balance largely in case goods. The cases are made up from shooks, but tins and drums are supplied by outside concerns. The entire plant is spread over 75 acres, an additional 100 acres being held for expansion.

The Fell Co. has been listed on the Sydney Stock Exchange, and there were 50,000 £1 preferred shares placed on the market in 1926. The report for the six months ending June 30, 1926, showed a profit of £1,050. A dividend of 10 per cent per annum on the amount paid up on preferred shares absorbed £349, and the balance was carried forward. Assets amounted to £253,865, of which land and buildings account for £71,987, plant and vehicles £97,828, stock £47,687, debtors and cash £28,887, and Commonwealth securities £7,475. Liabilities include £70,443 owed to the bank and other liabilities £18,719.

BORNEO

At Balikpapan, on the east coast of Borneo, in Dutch East Borneo, is located by far the largest refinery in the East Indies. Owned by the Batavian Co., this plant is now said to have a daily capacity of more than 30,000 bbls. Crude oil is received at the refinery through pipe lines from the various contributing centers in the Koetei Fields, the longest of these lines being a 5-inch pipe from the Sanga-Sanga wells, 65 miles away. The crude oils obtained vary from a light oil of 0.84 specific gravity to heavy asphaltic grades having a specific gravity of 0.96. Thus practically all petroleum products from light distillates to asphalt and dyestuff are produced. A sulphuric acid plant is also run in conjunction with the factory. The gasoline manufactured however, is of such high quality that sulphuric acid treatment is not required.

By the use of the Edeleanuan process of washing kerosene with sulphuric to free it from tarry products, the Balikpapan produces a very large quantity of high-grade kerosene, the kerosene plant having been substantially enlarged during the last few years. In addition to the kerosene output, all commercial grades of paraffin are produced with melting points ranging from 125 degrees to 140 degrees Fahrenheit. Some of the heavier oils from the Koetei pools are refined into lubricating oils. While these oils are not equal to corresponding American products, constant laboratory researches and the adoption of advanced refinery technique have

REED & COLE
CONTRACTORS
Grading and Hauling
Steel Tank Construction
318 Atlas Bldg., Tulsa, Okla.

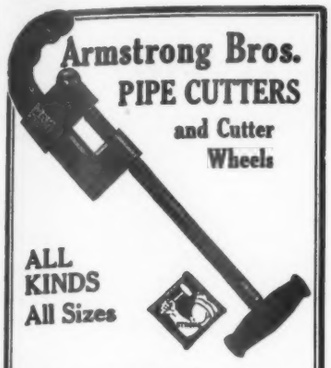
K & E
Steel Tapes
for *exact* measurements

GUARANTEED Accuracy and easy operation make K & E Tapes the logical ones to use. Our "Keco" *rust-resisting finish*, increases the life of the tape line.
The illustration shows our
No. 7142-T for Oil Gauger's use.
We carry tapes for gauging both *high* and *low* gravity oils.
Tape Catalog Free
Send for It Today!
KEUFFEL & ESSER CO.
NEW YORK, 127 Fulton Street. General Office and Factories, HOBOKEN, N. J.
CHICAGO ST. LOUIS SAN FRANCISCO MONTREAL
Drawing Materials, Mathematical and Surveying Instruments, Measuring Tapes

PRIMM OIL ENGINES
FOR DRILLING PUMPING AND PIPE LINE WORK
Hundreds are now used in the oil fields. Their satisfactory operation for years is the best recommendation to you.
—WRITE—
THE POWER MFG. CO.
722 Cheney Ave., MARION, IND.
"Oil Engine Builders for a Quarter Century"

Original Eotvos Torsion Balances
Sold or Rented
GEORGE STEINER
330 Houston Post-Dispatch Building, HOUSTON, TEXAS

S. F. SHAW
Mining Engineer
Consulting Work in Air and Gas Lifts
301 Terrell Road, San Antonio, Texas



Armstrong Bros.
PIPE CUTTERS
and Cutter Wheels

ALL KINDS
All Sizes

Equipped with Armstrong Bros. Improved Knife Blade Cutter Wheels made from ALLOY TOOL STEEL.

Write for free catalog

ARMSTRONG BROS. TOOL CO.
330 No. Francisco Ave. Chicago, U.S.A.

ARTHUR C. BROWN
SOLICITOR OF UNITED STATES AND FOREIGN PATENTS
406-412 KENNEDY BLDG.
Tulsa, Okla.
Mr. Fred Krueger
in Charge
Phone 4-2319

TURK & MAULDIN
ATTORNEYS AT LAW
209-214 Ritz Building
(Tom F. Carey, Income Tax Counsel)
TULSA, OKLA.

Cables: Ceallach, New York
Telephone: Whitehall 8256
JOHN EOGHAN KELLY
Consulting Engineer
17 Battery Place, New York City, N. Y.
Pasaje Coloma 6, Gautemala, C. A.
Examination, appraisal, management, negotiation of petroleum properties, mines, natural resources. Exceptional facilities in Latin America.

EDWIN B. HOPKINS
CONSULTING GEOLOGIST
25 Broadway
NEW YORK

PHILLIP MAVERICK
PETROLEUM GEOLOGIST
Telephone 93
Ricker & Dodson Bldg.
SAN ANGELO, TEXAS

Chester W. Washburne
Geologist and Engineer
27 William St., N. Y.

PATENTS *Write for Free Book*
MUNN & CO.
Associated for 81 years with the Scientific American
1551 Scientific American Building
24 West 40th Street, *New York City*
314 Scientific American Bldg., *Washington, D.C.*
1303 Tower Building, *Chicago, Ill.*
656 Hobart Building, *San Francisco, Cal.*
311 Van Nuys Building, *Los Angeles, Cal.*

TEXAS OIL MAPS
County and District Catalog on Application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

greatly improved upon the quality of the lubricating oils produced.

In addition to the refinery, one of the largest fueling stations in the Orient is maintained at Balikpapan. With a large storage capacity and adequate fueling facilities, vessels can be rapidly bunkered in a few hours.

The other refinery in Borneo is at Miri, on the northwest coast, in the British protectorate of Sarawak. It is operated by the Sarawak Oil Fields, Ltd., another subsidiary of the Royal Dutch Co. Crude petroleum refined here is drawn from the Brunei territory, just north of Miri, as well as from the region inland and southwest from Miri. The Brunei fields are understood to be owned or controlled by the British Malayan Petroleum Co., for which the Sarawak Oil Fields, Ltd., act as agents. The equipment of this refinery is modern, the principal products manufactured being gasoline, kerosene, and fuel oil. There is a fueling station in the same locality.

As the local consumption of products from the refinery at Miri is very slight, the official Sarawak export statistics can be considered as closely approximating the actual output of the refinery. The following export figures are in long tons and American dollars:

Oils—	Quantity 1925 Metric tons	Quantity 1924 Metric tons	Value 1925	Value 1924
Gasoline	91,670	71,931	$7,995,000	$6,273,000
Kerosene in bulk	102,502	105,146	3,505,000	3,596,000
Kerosene in cases	*6	*1,507	18	5,150
Fuel oil	203,531	262,327	1,972,000	2,542,000

*Number of cases.

The following official data have also been obtained, showing the quantities in metric tons exported during the first four months of 1926:

1926—	Benzine	Kerosene	Fuel oil
April	5,048	11,958	17,542
May	9,949	6,342	14,759
June	11,167	7,725	42,608
July	6,336	6,503	18,092
	32,500	32,528	93,001

On Tarakan Island, off the northeast coast of Borneo, is a plant at which the crude oil from the Tarakan fields on the mainland is prepared as fuel oil. There is no refinery at this point, the crude oil being of such quality that by a very simple process the water and sand can be removed, rendering the oil immediately suitable for bunkering without further treatment. Ample storage facilities exist for both crude oil and the prepared fuel oil. Besides distribution through a fueling station on Tarakan Island, considerable quantities of both crude oil and prepared fuel oil are exported, much of it to Japan.

JAPAN

From report by Trade Commissioner Paul P. Steintorf, Tokyo.

Information relative to petroleum refineries is given in the following tables:

Location—	Ownership—	Plant Equipmt.	Source Materials—	Cap'y Bbls.
Kashiwazaki, Niigata	Nippon Oil Co.	Old	Japan	2,200
Kashiwazaki, Niigata	Nippon Oil Co.	Old	Japan	1,650
Niigata, Niigata[1]	Nippon Oil Co.	[2]New	Japan and America	900
Akita, Akita[3]	Nippon Oil Co.	Old	Japan	3,300
Tsurumi, Kanagawa[3]	Nippon Oil Co.	[4]New	Japan and America	1,000
Hokkaido, Hokkaido[5]	Nippon Oil Co.	Old	Japan	[6] ...
Taiwan, Taowan[3]	Nippon Oil Co.	Old	Japan	[6] ...
Oshima, Tokyo[1]	Ogura Oil Co.	[7]New	Borneo and Japan	500
Tokyo[1]	Asahi Oil Co.	Old	Borneo	500
Tokuyama[8]	Asahi Oil Co.	Old	Borneo	[6] ....
Niitsu, Niigata[1]	Kyodo Hambaijo	Old	Japan and Borneo	600

[1]Gasoline, kerosene, lubricating oils, and gas oils.
[2]Equipped with cross cracking plant.
[3]Kerosene, gas oils, lubricating oils, and asphalt.
[4]Equipped with Dubbs cracking plant.
[5]Crude gasoline, wax distillate, lubricating oils, kerosene, gas oils, and grease.
[6]Not available.
[7]Equipped with Jenkins cracking plant.
[8]Gasoline, kerosene, gas oils, and fuel oils.

CERAM

The small topping plant at Boela Bay, on the northeastern coast of Ceram, was originally set up in Java, where it was the property of the Rembang Industrial Co. In 1918 the equipment was purchased by the Dordtsche Petroleum Co. (already a subsidiary of the Batavian Co.) and transported to Ceram. The crude oil from the oil fields in Ceram has since that time been topped for the lighter products at Boela Bay, the topped crude being then shipped to the Batavian Co.'s refinery at Balikpapan for the final refining processes. The residue is sold in Ceram, at a small fueling station near the topping plant. The last available statistics show that the production of crude oil in the Ceram fields in 1921 amounted to about 333,300 bbls.

KERN COUNTY DRAWING

SAN FRANCISCO, Calif., Aug. 20.—One hundred sixty acres in Kern County went to Frank L. Lozaw of 2437 Clay Avenue, Fresno, at the land drawing conducted by the government land office in Sacramento.

Seventy-eight persons filed applications for the potential oil land that had been placed on the market through cancellation of an entry held by another party, and Mr. Lozaw's ticket was drawn. It cost each applicant $20 to make a bid for the land, and after the drawings $10 was returned to each of the applicants with the exception of Mr. Lozaw.

At a recent drawing Alvin Tribe, Bakersfield cigar dealer, won a government permit covering 640 acres comprising Section 28-27-28, south of the Poso Creek discovery well. A few days ago he leased the property to the Union Oil Co. for a handsome bonus and an overriding royalty of 7½ and 2 per cent. The lease calls for the drilling of a well by November 26. The lease cost Mr. Tribe just 2 cents.

SHOLOM ALECHEM ELECTION

ARDMORE, Okla., Aug. 20.—R. A. Birk, district geologist with the Amerada Petroleum Corp. here, has been elected grand crown block of the Sholom Alechem International, succeeding Lloyd Noble, whose term expired, and who now automatically becomes a member of the Grand Council of Skidded Rigs.

Other new officers of the oil men's order of good-fellowship include Wood Dawson of Wirt, grand slush pit; Allen DeShong of Ardmore, grand walking beam; LaVerne Decker, Ardmore, grand rock hound; Lawrence Beattie, Ardmore, grand shyster; Tom Norman, Ardmore, grand gasser; W. E. Chisholm, Ardmore, grand tool pusher, and Russell Lathrop, Ardmore, grand log book.

Members of the Council of Grand Roustabouts include Jim Saverline, Healdton; Wallace Kahl, Wilson; Knox Garvin, Duncan; Dave Dunn, Clemscot, and Ed Galt, F. M. Porter, C. H. Everett and Jack Reardon, all of Ardmore.

GEORGE K. STAYTON
Attorney at Law
Oil and Gas and Land Practice in Winkler County Field
Pyote, Texas

KORK KELLEY
Pipe Line Contractor
Any Size—Any Length
AMARILLO
BORGER, TEXAS
Room 12, Massie Bldg.

Simplex Emergency Jack No. 310

No. 310—Capacity 15 tons
Single acting—automatic lowering

No. 310 is known as the Jack of a hundred uses. A standby in every oil field. Operates at any angle or vertically.

Built with drop forged steel working parts and furnished with five foot steel chain—steel auxiliary claw and steel level bar.

Unsurpassed for extricating stalled motor trucks—jacking steam engines—raising and setting boilers, raising sand reels and casing sills, skidding rigs and moving tanks and heavy machinery.

Templeton, Kenly & Co., Ltd.
Established 1899
Sole Manufacturers of the Simplex Jacks
Chicago, Ill., U.S.A.

Simplex Jacks are extensively imitated but they never have been equaled in man-power, simplicity, stability or safety.

At Your Supply House

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for June

Company—	Month	Daily Av.
*Prairie P. L. Co.	4,440,000	148,000
Gulf P. L. Co.	1,330,590	44,353
Texas P. L. Co.	853,625	28,454
Magnolia Pet. Co.	1,716,829	57,228
Empire P. L. Co.	1,826,981	60,899
Cosden P. L. Co.	971,624	32,387
Sinclair P. L. Co.	2,415,090	80,503
*Other lines	12,720,000	424,000
Total June	26,264,739	875,824
Total May	26,935,013	868,870
Difference	670,274	6,954

Shipments

*Prairie P. L. Co.	5,505,552	183,518
Gulf P. L. Co.	1,122,928	37,431
Texas P. L. Co.	725,638	24,188
Magnolia Pet. Co.	1,206,159	40,205
Empire P. L. Co.	1,253,736	41,791
Cosden P. L. Co.	826,072	27,536
‡Sinclair P. L. Co.	2,633,047	87,768
*Other lines	12,000,000	400,000
Total June	25,273,132	842,437
Total May	25,887,274	835,073
Difference	614,142	7,364

Stocks

*Prairie O. & G. Co.	30,300,000
*Prairie P. L. Co.	2,000,000
Gypsy Oil Co. & Gulf P. L. Co.	8,761,873
The Texas Company	4,723,332
Magnolia Pet. Co.	5,611,652
Empire P. L. Co.	3,277,315
Cosden P. L. Co.	2,915,742
*Sinclair Crude Oil Pur. Co.	19,600,000
Carter Oil Co.	15,533,629
*Other lines	10,650,000
Total June	103,378,545
Total May	101,197,943
Difference	2,180,602

*Estimated. ‡Prairie Pipe Line shipments include Texas crude and Sinclair Pipe Line shipments include Wyoming, Texas crude. Note—Stocks do not include approximately 4,000,000 bbls. of crude oil held in storage on private tank farms and leases and approximately 1,700,000 bbls. of Texas Panhandle crude in storage in Oklahoma and Kansas.

EASTERN PIPE LINES

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for May and June:

	May, '27	June, '27
Nat. Transit	157,165.84	157,315.01
S. W. Pa. P. L.	90,017.98	93,809.85
Eureka P. L.	392,779.77	390,791.12
Buckeye P. L. (Macksburg)	352,189.09	344,562.31
Buckeye P. L. (Cleve.)	11,455.70	11,529.52
Buckeye P. L. (Lima, etc.)	124,796.30	139,035.28
Indiana P. L.	10,527.86	11,406.99
Cumberland P. L.	256,545.97	250,266.24
N. Y. Transit	23,432.96	24,809.81
Tidewater P. L.	189,601.39	189,296.14
Pure Oil	170,519.75	167,510.92
Emery P. L.	55,212.48	55,995.64
Paragon Dev.	29,001.79	26,923.82
Pittsburgh P. L.	5,562.53	5,710.36
Stoll Oil Ref.	.....	13,632.37
Total	1,868,809.41	1,882,695.38
Daily average	60,284.17	62,756.51

Note: Indian Refining Co. also reported other receipts of 369,938.94 bbls. Paragon Refining Co. had other receipts of 172,169.81 bbls. Paragon Development had other receipts of 2,652.29 bbls. Pure Oil had other receipts of 15,161.30 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for May and June.

	May, '27	June, '27
Nat. Transit	231,962.23	307,649.33
S. W. Pa. P. L.	369,312.49	317,891.14
Eureka P. L.	196,684.71	181,937.70
Buckeye P. L. (Macksburg)	168,751.39	165,198.17
Buckeye P. L. (Cleve.)	730.53	971.56
Buckeye P. L. (Lima, etc.)	961,591.53	930,510.48
Indiana P. L.	995,738.41	975,616.39
Cumberland, P. L.	135,591.56	150,959.91
N. Y. Transit	229,615.40	315,171.90
Northern P. L.	194,488.92	187,632.30
Tidewater P. L.	140,789.69	139,216.41
Pure Oil	214,677.25	163,634.33
Emery P. L.	54,063.88	54,410.09
Paragon Ref.	160,374.55	171,016.11
Indian Ref.	401,975.59	394,960.09
Paragon Dev.	20,880.92	29,986.53
Pittsburgh P. L.	5,390.35	6,334.84
Total	4,491,719.30	4,493,146.29
Daily average	144,894.17	149,771.54

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky, at the close of May and June:

	May, '27	June, '27
Nat. Transit	1,153,962.57	1,150,482.45
S. W. Pa. P. L.	680,944.30	705,827.92
Eureka P. L.	1,540,369.93	1,760,893.31
Buckeye P. L. (Macksburg)	447,695.96	450,027.81
Buckeye P. L. (Cleveland)	52,293.46	38,348.14
Buckeye P. L. (Lima, etc.)	4,198,037.49	4,303,614.65
Indiana P. L.	588,782.56	585,161.78
Cumberland P. L.	620,713.60	581,519.53
Southern P. L.	407,385.13	406,472.60
N. Y. Transit	621,235.51	613,088.14
Northern P. L.	551,236.96	509,881.48
Pure Oil	379,362.15	397,272.76
Emery P. L.	8,061.15	9,961.99
Paragon Ref.	23,688.15	24,515.54
Indian Ref.	74,218.74	45,531.36
Paragon Dev.	6,892.28	6,969.48
Pittsburgh P. L.	4,401.32	4,104.27
Total	11,359,381.28	11,493,673.21
Increase	247,086.45	134,291.93

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of May and June showing the gross stocks of the above fields:

	May, '27	June, '27
Pennsylvania	3,882,764.43	4,097,743.11
Lima	878,323.51	939,796.06
Kentucky	1,204,896.59	1,190,128.89
Mid-Continent	5,339,671.75	5,233,298.85
Illinois	53,725.00	32,706.30
Total	11,359,381.28	11,493,673.21

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1924	1925	1926	1927
January	62,638	56,831	55,630	56,209
February	64,023	60,606	60,394	61,298
March	68,721	60,575	61,644	63,247
April	71,058	63,062	63,019	60,337
May	63,942	59,217	60,580	60,284
June	63,230	61,270	64,131	62,757
July	64,208	62,639	63,206	.....
August	59,942	59,686	61,815	.....
September	62,930	62,510	64,639	.....
October	64,976	60,995	62,704	.....
November	56,282	59,350	61,774	.....
December	55,814	57,974	58,756	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1924	1925	1926	1927
January	145,518	157,889	156,056	141,227
February	148,732	160,863	159,488	138,534
March	147,098	154,591	160,239	133,777
April	147,611	151,429	152,372	140,227
May	134,997	146,995	160,998	144,894
June	143,010	149,467	160,257	149,772
July	124,187	161,338	160,945	.....
August	123,120	161,730	151,929	.....
September	127,325	156,719	158,915	.....
October	123,170	145,388	161,132	.....
November	124,409	143,582	152,668	.....
December	151,392	150,162	136,428	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1925	1926	1927
January	11,363,276	9,859,170	9,718,001
February	11,192,924	9,579,354	10,119,101
March	11,158,297	9,438,292	10,794,804
April	11,062,082	9,805,851	11,113,201
May	11,207,562	9,631,757	11,359,381
June	11,093,796	9,585,904	11,493,673
July	11,067,453	9,734,687	.....
August	10,974,481	9,668,947	.....
September	10,781,763	9,432,732	.....
October	11,086,860	9,269,806	.....
November	11,068,158	9,257,667	.....
December	10,458,445	9,454,512	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above.

1926—	Runs	Shipmts.	Stocks
May	2,933.29	2,096.35	13,295.91
June	3,217.62	1,655.15	14,858.41
July	3,025.86	4,076.11	13,808.31
August	2,886.59	2,121.21	14,574.54
September	2,788.18	3,373.06	13,988.61
October	2,991.86	2,307.75	14,671.25
November	2,810.60	1,664.55	15,817.21
December	2,847.52	5,561.11	13,103.71
1927—			
January	2,641.54	1,470.42	14,274.84
February	2,764.30	1,082.82	15,956.32
March	2,587.20	1,378.56	16,664.96
April	2,834.23	1,512.65	17,986.54
May	2,768.47	539.29	20,215.72

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, July 1	2,034,926.20
Runs from wells	611,736.41
Other receipts	295,543.21
Regular deliveries	474,466.44
Other deliveries	504,566.56

The amount of Illinois oil run by the Tide Water Pipe Co. in June was 25,349.64 bbls. and deliveries were 57,817.34 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1926—	Runs	Deliveries
June	693,102.34	558,054.34
July	713,490.66	490,092.32
August	701,796.92	555,766.63
September	688,798.66	516,088.91
October	681,648.96	521,467.23
November	651,263.38	498,833.27
December	668,909.58	587,947.61
1927—		
January	621,421.03	530,095.91
February	595,831.16	476,950.71
March	727,593.91	554,947.43
April	593,226.97	444,818.43
May	728,759.40	543,192.61
June	640,975.85	532,217.78

Tide Water Pipe Co., Ltd., also delivered in June, 205,879.96 bbls.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS						Total All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total		
April	12,667	4,367	47,667	15,100	13,300	93,100	.....	.....	.....	.....	.....		93,100
May	10,452	7,645	18,387	9,226	6,226	51,935	.....	.....	.....	.....	.....		51,935
June	25,567	11,233	45,833	17,367	10,367	120,367	.....	.....	.....	.....	.....		120,367
July	13,484	17,290	32,065	9,129	5,452	78,419	.....	.....	.....	.....	968		79,387

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

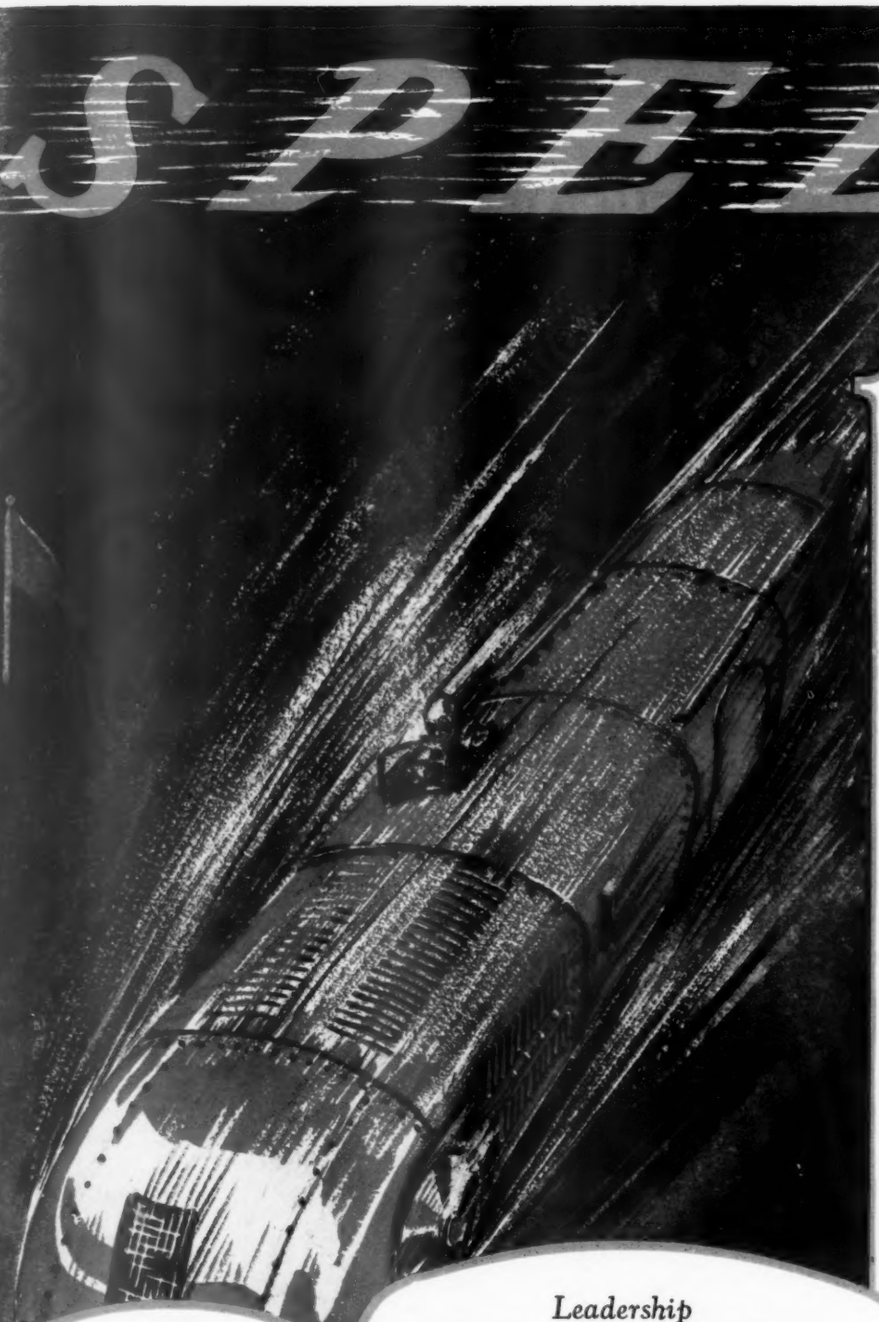
Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS						Total All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total		
April	22,700	9,033	62,033	6,067	26,567	126,400	5,067	18,033	.....	.....	23,100		149,500
May	21,032	9,807	93,452	7,774	23,580	155,645	1,807	30,612	1,936	.....	34,355		190,000
June	18,167	9,700	83,367	10,900	16,567	139,200	2,000	31,800	.....	.....	33,800		173,000
July	22,226	10,387	80,194	7,194	28,710	158,710	3,226	25,064	806	.....	29,096		187,806

GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

1926—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
July:	Month	18,743,199	14,657,482	18,983,759	3,582,367	5,019,892	2,173,813	3,336,664	3,420,000	64,917,076
	Daily average	604,619	472,822	451,089	115,575	161,932	70,123	107,634	110,323	2,094,099
August:	Month	18,765,080	14,618,236	17,093,586	3,681,436	4,878,191	2,190,739	3,457,697	3,339,500	68,024,465
	Daily average	605,325	471,556	551,406	118,756	157,361	73,896	111,538	107,726	2,194,338
September:	Month	18,104,954	14,466,510	17,580,100	3,450,060	4,603,230	2,079,840	3,141,123	3,330,000	66,756,817
	Daily average	603,498	482,217	586,003	115,002	153,441	69,328	104,704	111,000	2,225,194
October:	Month	18,966,058	15,720,689	19,001,328	3,714,837	4,635,138	2,166,559	3,071,720	3,398,000	70,664,329
	Daily average	611,808	507,119	612,946	119,837	149,198	69,889	99,088	109,613	2,279,496
November:	Month	19,173,128	16,876,950	18,593,180	3,593,490	4,399,490	2,054,911	2,842,587	3,216,000	70,649,736
	Daily average	639,104	562,565	619,772	119,783	143,316	68,497	94,752	107,200	2,354,990
December:	Month	20,276,950	17,882,908	19,763,591	3,654,156	4,266,189	2,018,734	2,658,301	3,313,000	73,833,829
	Daily average	654,095	576,868	637,212	117,876	137,619	65,120	85,752	106,871	2,381,414
1927—										
January:	Month	20,184,872	19,025,426	18,605,363	3,769,879	4,076,469	1,905,570	2,620,303	3,322,500	73,530,382
	Daily average	651,126	614,046	600,173	121,609	131,499	61,470	84,203	107,500	2,371,948
February:	Month	17,982,711	19,752,348	16,482,712	3,352,076	3,574,256	1,784,104	2,385,135	3,007,200	68,321,542
	Daily average	642,240	705,441	588,704	119,717	127,652	63,718	85,183	107,400	2,440,967
March:	Month	19,856,724	22,480,921	18,282,617	3,676,143	3,853,920	2,032,982	2,476,798	3,325,200	75,923,905
	Daily average	639,862	725,191	588,149	118,553	124,320	65,580	79,574	105,160	2,449,158
April:	Month	19,492,835	22,208,130	17,801,140	3,516,930	3,378,240	1,994,330	2,615,770	3,474,000	74,482,395
	Daily average	648,870	740,271	593,371	117,231	112,608	66,491	87,192	115,800	2,482,746
May:	Month	19,506,954	23,258,462	19,539,082	3,704,314	3,493,669	1,935,175	2,742,588	3,467,000	77,646,246
	Daily average	629,238	750,273	630,292	119,494	112,699	62,425	88,471	111,839	2,504,721
June:	Month	19,181,442	22,830,330	18,399,816	3,437,580	3,365,760	1,850,820	2,592,437	3,330,000	75,018,179
	Daily average	639,381	761,011	613,327	114,586	112,192	62,694	86,414	111,000	2,500,606
Total 12 months		230,313,997	223,736,393	215,067,369	43,131,968	49,434,434	24,217,577	33,941,123	39,963,000	859,757,861

SPEED



WORLD SPEED RECORDS

Airplane—	278.48	miles	per hr.
Motor-car—	203.79	"	"
Railroad—	120	"	"
Motor-boat—	80	"	"
Destroyer—	43.75	"	"

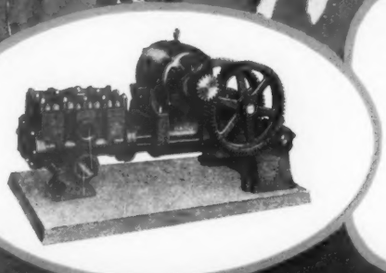
Horse—1 mile in 1 min. 34 sec.
Man—1 mile in 4 min. 10.4 sec.

The next time you skim along the highway at sixty, and you feel that the old bus is just about everything a good bus should be, consider the accomplishment of Major Segrave at Daytona Beach, Florida. Driving a "mystery" Sunbeam, he traveled at a higher rate than any one has ever traveled over the surface of the earth before—203.79 miles per hour.

. . . . . In speed, this feat rivals that of GASO in the field of oil industry pumps. From scratch to the position it now holds in just a few years is a remarkable record, you will agree!

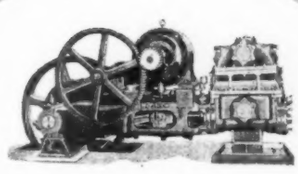
Your copy of our instructive 64-page catalog will be sent on request.

GASO PUMP & BURNER MFG. CO.
Tulsa · Oklahoma



Leadership
In the Field of Motorized Pumps

When Midwest decided on its gigantic motorization program at Salt Creek, 109 new pumps were installed. All were GASOS! Let us tell you more about this development.



GASO PUMPS
for every oil industry need

Wherever Men Drill for Oil or Gas the name HUGHES on a rotary tool is a guarantee of~

SUPERIOR PERFORMANCE

Write for
Complete new
Catalog on
"HUGHES TOOLS"

Sold by
Supply Stores
Everywhere

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.

Main Office and Plant
HOUSTON
TEXAS

Export Office
Woolworth Bldg.
New York City